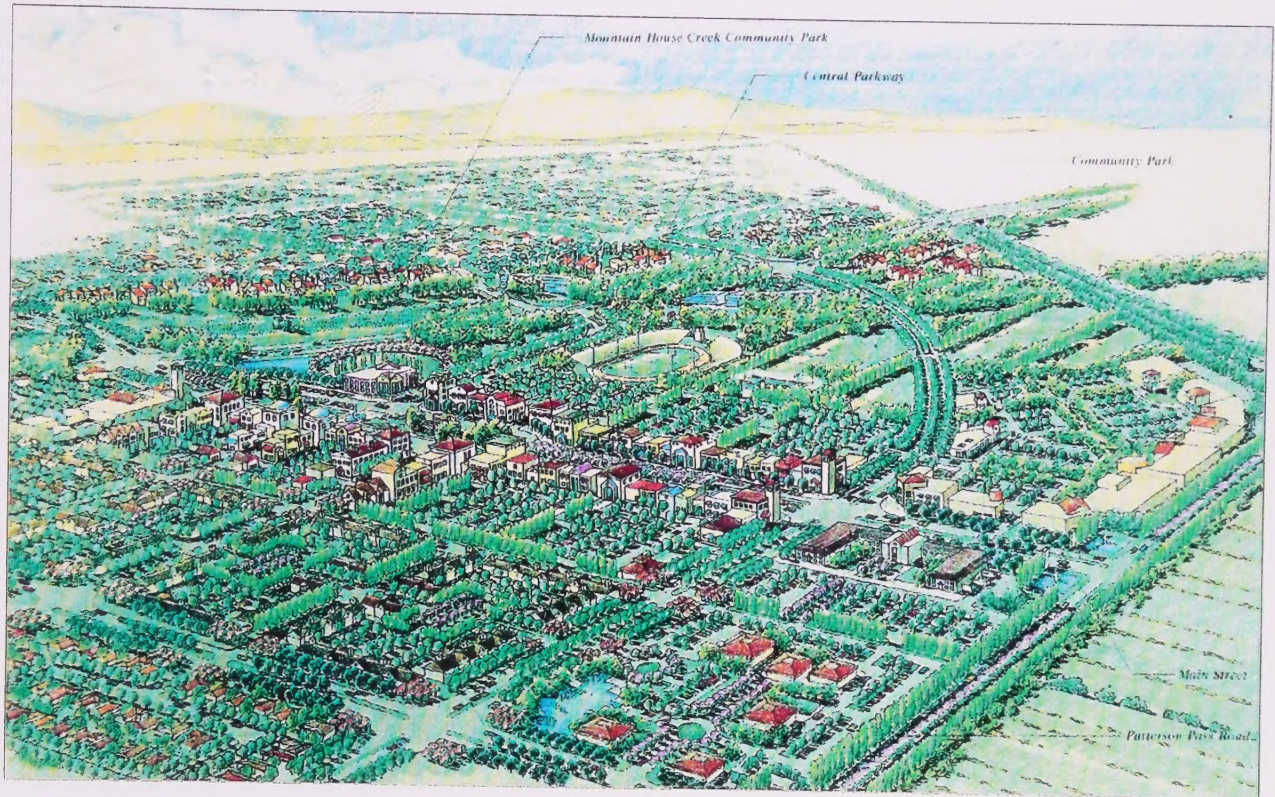


MOUNTAIN HOUSE

New Community



Master Plan Public Hearing Draft


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Mountain House

Master Plan

Public Hearing Draft

Trimark Communities
San Joaquin County

September 1994

Table of Contents

EXECUTIVE SUMMARY

GOALS AND DEVELOPMENT

CHAPTER ONE:	MASTER PLAN INTRODUCTION
CHAPTER TWO:	COMMUNITY VISION
CHAPTER THREE:	LAND USE
CHAPTER FOUR:	DEVELOPMENT AND DESIGN

PUBLIC SERVICES

CHAPTER FIVE:	EDUCATION, CHILD CARE AND LIBRARY SERVICES
CHAPTER SIX:	PUBLIC HEALTH AND SAFETY
CHAPTER SEVEN:	RECREATION AND OPEN SPACE

PUBLIC WORKS INFRASTRUCTURE

CHAPTER EIGHT:	ENERGY AND TELECOMMUNICATIONS
CHAPTER NINE:	TRANSPORTATION AND CIRCULATION
CHAPTER TEN:	AIR QUALITY AND TRANSPORTATION MANAGEMENT
CHAPTER ELEVEN:	NOISE
CHAPTER TWELVE:	POTABLE WATER SYSTEMS
CHAPTER THIRTEEN:	WASTEWATER TREATMENT AND COLLECTION SYSTEM
CHAPTER FOURTEEN:	WASTEWATER REUSE
CHAPTER FIFTEEN:	STORM DRAINAGE AND FLOOD PROTECTION

IMPLEMENTATION

CHAPTER SIXTEEN:	PUBLIC SERVICE PROVISIONS
CHAPTER SEVENTEEN:	IMPLEMENTATION

EXECUTIVE SUMMARY

I	COMMUNITY CONCEPT	i
II	MASTER PLAN PURPOSE	iv
III	SETTING	v
IV	LAND USE	viii
V	DEVELOPMENT AND DESIGN	xi
VI	PUBLIC SERVICES	xi
	VI-1 Education and Child Care	xi
	VI-2 Public Health and Safety	xi
	VI-3 Recreation and Open Space	xvi
VII	PUBLIC INFRASTRUCTURE	xix
	VII-1 Energy and Telecommunications	xix
	VII-2 Transportation and Circulation	xix
	VII-3 Air Quality and Transportation Management	xix
	VII-4 Noise	xix
	VII-5 Potable Water Systems	xix
	VII-6 Wastewater Treatment and Collection	xx
	VII-7 Wastewater Reuse	xx
	VII-8 Storm Drainage and Flood Protection	xx
VIII	IMPLEMENTATION	xxi
	VIII-1 Public Service Provisions	xxi
	VIII-2 Implementation	xxi

GOALS AND DEVELOPMENT

CHAPTER ONE: MASTER PLAN INTRODUCTION

1.1	MASTER PLAN PURPOSE AND FUNCTION	1.1
1.1.1	Purpose of the Master Plan	1.1
1.1.2	Relationship to the Public Financing Plan	1.2
1.1.3	Relationship to Future Specific Plans	1.2
1.1.4	How to Use the Master Plan	1.2
1.2	PLANNING CONTEXT	1.3
1.2.1	Planning History and Environmental Review	1.3
1.2.2	Relationship to County Planning Documents	1.4
1.2.3	Controlling Document	1.4
1.2.4	Master Developer Responsibility	1.7
1.3	SITE DESCRIPTION	1.7
1.3.1	Location	1.7
1.3.2	Pre-Development Land Ownership Patterns (1993)	1.7
1.3.3	Pre-development Land Use and Infrastructure (1993)	1.7
1.3.4	Williamson Act Contracts	1.15
1.4	ENVIRONMENTAL SETTING	1.18
1.4.1	Site History	1.18
1.4.2	Visual Character	1.18
1.4.3	Vegetation and Wildlife	1.18
1.4.4	Wetlands	1.19
1.4.5	Hydrology and Drainage	1.19
1.4.6	Flood Zones	1.20
1.4.7	Geology and Soils	1.20
1.4.8	Public Health and Safety	1.21

CHAPTER TWO: COMMUNITY VISION

2.1	COMMUNITY CONCEPT	2.1
2.2	OVERALL GOALS	2.2
2.3	COMMUNITY CHARACTER GOALS AND OBJECTIVES	2.2
2.4	LAND USE GOALS AND OBJECTIVES	2.3
2.5	HOUSING GOALS AND OBJECTIVES	2.4
2.6	ECONOMIC DEVELOPMENT GOALS AND OBJECTIVES	2.4
2.7	CIRCULATION GOALS AND OBJECTIVES	2.5
2.8	PUBLIC SERVICES GOALS AND OBJECTIVES	2.5
2.9	RESOURCE CONSERVATION GOALS AND OBJECTIVES	2.6

CHAPTER THREE: LAND USE

3.1	INTRODUCTION	3.1
3.1.1	Purpose	3.1
3.1.2	Overall Concepts	3.1
3.1.3	Neighborhood Structure and Village Centers	3.5
3.1.4	Community Identity and Design Expression	3.5
3.2	COMMUNITY LAND USE PLAN	3.7
3.2.1	Purpose of the Land Use Plan	3.7
3.2.2	Land Use Program	3.7
3.2.3	Accuracy in Relationship to Specific Plans	3.7
3.2.4	Pre-Existing Land Uses Within Mountain House	3.17
3.2.5	Description of Planned Land Uses	3.20
3.3	LAND USE REGULATIONS AND PERMITTED USES	3.25
3.3.1	Residential Densities and Unit Totals	3.25
3.3.2	Permitted Uses	3.29
3.3.3	Home Occupations	3.29
3.3.4	Second Units	3.30
3.3.5	Senior Housing	3.30
3.4	RESIDENTIAL OBJECTIVES AND POLICIES	3.31
3.4.1	Neighborhood Structure	3.31
3.4.2	Residential Site Planning and Design	3.32
3.5	TOWN CENTER OBJECTIVES AND POLICIES	3.36
3.6	COMMERCIAL OBJECTIVES AND POLICIES	3.39
3.6.1	General Issues	3.39
3.6.2	Neighborhood Commercial	3.40
3.6.3	Community Commercial	3.42
3.6.4	General Commercial	3.43
3.6.5	Freeway Service Commercial	3.44
3.7	INDUSTRIAL AND OFFICE USE POLICIES	3.46
3.8	PUBLIC AND INSTITUTIONAL USE POLICIES	3.48
3.9	JOBS/HOUSING & AFFORDABLE HOUSING	3.49
3.9.1	Definitions and Assumptions	3.49
3.9.2	Jobs/Housing Program	3.52
3.9.3	Affordable Housing Program	3.62
3.9.4	Monitoring and Enforcement	3.70
3.10	SPECIFIC PLAN REQUIREMENTS	3.72

CHAPTER FOUR: DEVELOPMENT AND DESIGN

4.1	INTRODUCTION	4.1
4.2	DEVELOPMENT STANDARDS	4.1
4.2.1	Lot and Structure Standards	4.1
4.2.2	Grading Standards	4.1
4.2.3	Parking and Loading Requirements	4.2
4.2.4	Building Requirements	4.2
4.2.5	Signage	4.3
4.2.6	Lighting	4.4
4.2.7	Walls and Fences	4.5

4.2.8	Site Furnishings	4.5
4.2.9	Public Art and Monuments	4.6
4.2.10	Siting Criteria for Community Facilities	4.6
4.2.11	Gas and Electric Transmission Easements	4.7
4.3	COMMUNITY EDGES	4.7
4.3.1	Community Edges	4.7
4.3.2	West Edge Treatment	4.8
4.3.3	East Edge Treatment	4.15
4.3.4	South/Freeway Edge Treatment	4.24
4.3.5	North Edge at Regional Park	4.29
4.4	LANDSCAPE CONCEPT AND POLICIES	4.31
4.5	SPECIFIC PLAN REQUIREMENTS	4.35

PUBLIC SERVICES

CHAPTER FIVE: EDUCATION , CHILD CARE AND LIBRARY SERVICES

5.1	EDUCATION	5.1
5.1.1	Introduction	5.1
5.1.2	Assumptions	5.1
5.1.3	School Facilities	5.2
5.1.4	School Siting Criteria	5.6
5.1.5	School Support Facilities and Services	5.8
5.1.6	Integration of School and Community Facilities	5.9
5.2	CHILD CARE FACILITIES	5.9
5.3	LIBRARY SERVICES	5.10
5.4	PHASING AND COSTS	5.11
5.4.1	School Phasing	5.11
5.4.2	Library Phasing	5.12
5.4.3	Capital Facility Costs	5.13
5.4.4	Operations and Maintenance	5.13
5.5	SPECIFIC PLAN REQUIREMENTS	5.14

CHAPTER SIX: PUBLIC HEALTH AND SAFETY

6.1	INTRODUCTION	6.1
6.2	POLICE PROTECTION	6.1
6.3	FIRE PROTECTION AND EMERGENCY RESPONSE	6.2
6.4	MEDICAL SERVICES	6.5
6.5	EMERGENCY PREPAREDNESS	6.6
6.6	ANIMAL CONTROL	6.7
6.7	WASTE MANAGEMENT	6.7

6.8	POTENTIAL SITE HAZARDS	6.11
6.8.1	Fuel Lines and Pipelines	6.11
6.8.2	Historic Pesticide / Herbicide Residues	6.12
6.8.3	Livestock Waste Management	6.13
6.8.4	Soils, Geologic and Seismic Hazards	6.14
6.8.5	Other Potential Hazards	6.15
6.9	ELECTRIC AND MAGNETIC FIELDS	6.16
6.10	ASBESTOS	6.17
6.11	MOSQUITO ABATEMENT	6.18
6.12	PHASING AND COSTS	6.18
6.12.1	Capital Facility Cost and Phasing	6.18
6.12.2	Operations and Maintenance	6.19
6.14	SPECIFIC PLAN REQUIREMENTS	6.20

CHAPTER SEVEN: RECREATION AND OPEN SPACE

7.1	INTRODUCTION	7.1
7.2	PARKS AND RECREATION	7.1
7.2.1	Assumptions and Definitions	7.3
7.2.2	Recreation System	7.4
7.2.3	Neighborhood Parks	7.7
7.2.4	Mountain House Creek Community Park	7.9
7.2.5	Other Community Parks	7.17
7.2.6	Old River Regional Park	7.19
7.2.7	Pedestrian Paths	7.24
7.2.8	Private Recreation	7.26
7.2.9	Other Open Space	7.27
7.3	BIOLOGICAL RESOURCES MANAGEMENT	7.27
7.3.1	Introduction	7.27
7.3.2	Habitat Management Plan (HMP)	7.27
7.3.3	Swainson's Hawk	7.31
7.3.4	San Joaquin Kit Fox	7.36
7.3.5	Other Special-Status Species	7.37
7.3.6	Wetlands Management	7.39
7.3.7	Tree Mapping and Conservation Policy	7.41
7.4	CULTURAL RESOURCES	7.43
7.5	PHASING AND COSTS	7.44
7.5.1	Capital Facility Cost and Phasing	7.44
7.5.2	Operations and Maintenance	7.46
7.6	SPECIFIC PLAN REQUIREMENTS	7.46

PUBLIC WORKS INFRASTRUCTURE

CHAPTER EIGHT: ENERGY AND TELECOMMUNICATIONS

8.1	INTRODUCTION	8.1
8.2	ELECTRICITY	8.1
8.3	NATURAL GAS	8.5

8.4	ENERGY EFFICIENCY	8.8
8.5	TELECOMMUNICATIONS SYSTEMS	8.10
8.5.1	Overall Telecommunications System	8.10
8.5.2	Residential Communications	8.11
8.5.3	Business Communications	8.11
8.5.4	Community Services	8.12
8.6	SITING CRITERIA FOR PUBLIC FACILITIES	8.14
8.7	PHASING AND COSTS	8.14
8.7.1	Capital Facility Cost and Phasing	8.14
8.7.2	Operations and Maintenance	8.15

CHAPTER NINE: TRANSPORTATION AND CIRCULATION

9.1	INTRODUCTION	9.1
9.1.1	Background	9.1
9.1.2	Transportation Trigger Points	9.1
9.1.3	Fair Share	9.2
9.1.4	Relationship to Specific Plan	9.3
9.2	FREEWAY IMPROVEMENTS	9.3
9.3	COUNTY ARTERIALS	9.8
9.4	ARTERIAL INTERSECTIONS	9.13
9.5	ON-SITE ROADWAY CIRCULATION AND DESIGN	9.18
9.6	ROADWAY MAINTENANCE	9.48
9.7	VEHICULAR PARKING	9.48
9.8	BICYCLE AND PEDESTRIAN FACILITIES	9.51
9.8.1	Bicycle Facilities	9.51
9.8.2	Pedestrian Facilities	9.54
9.9	TRANSIT	9.57
9.9.1	Bus Transit	9.57
9.9.2	Rail Transit	9.60
9.9.3	Rail Crossings	9.62
9.10	PHASING AND COSTS	9.65
9.10.1	Capital Facility Cost and Phasing	9.65
9.10.2	Operations and Maintenance	9.70
9.11	SPECIFIC PLAN REQUIREMENTS	9.71

CHAPTER TEN: AIR QUALITY AND TRANSPORTATION MANAGEMENT

10.1	INTRODUCTION	10.1
10.2	OVERALL ISSUES AND CROSS-REFERENCES	10.1
10.3	TRANSPORTATION DEMAND MANAGEMENT	10.3
10.3.1	TDM Measures	10.4
10.4	CLEANER FUELS	10.6
10.5	CONSTRUCTION PROGRAM FOR AIR QUALITY	10.7
10.6	HOUSES AND BUILDINGS	10.7

10.7	SPECIFIC PLAN REQUIREMENTS	10.8
CHAPTER ELEVEN: NOISE		
11.1	INTRODUCTION	11.1
11.2	ASSUMPTIONS	11.1
11.3	MOBILE SOURCE NOISE CONTROL	11.2
11.3.1	Overall Mobile Noise Impacts	11.4
11.3.2	I-205 Freeway	11.5
11.3.3	Arterial Roadways	11.6
11.3.4	Railroad	11.6
11.3.5	Byron Airport	11.7
11.3.6	Agricultural Equipment	11.9
11.3.7	Existing Residences	11.9
11.4	STATIONARY SOURCE NOISE CONTROL	11.10
11.5	SITE AND BUILDING DESIGN	11.11
11.6	SPECIFIC PLAN REQUIREMENTS	11.11
CHAPTER TWELVE: POTABLE WATER SYSTEMS		
12.1	INTRODUCTION	12.1
12.2	ASSUMPTIONS	12.1
12.3	POTABLE WATER SUPPLY AND DISTRIBUTION	12.2
12.3.1	Water Supply	12.2
12.3.2	Water Demand	12.6
12.3.3	Water Conservation	12.8
12.3.4	BBID Service to Interim Agricultural Operations	12.9
12.3.5	Raw Water Conveyance	12.10
12.3.6	Water Treatment Plant	12.13
12.3.7	Water Storage	12.16
12.3.8	Water Distribution System	12.17
12.3.9	Sludge Disposal	12.19
12.3.10	Siting Criteria	12.20
12.4	REGULATORY REQUIREMENTS AND PERMITS	12.22
12.5	PHASING AND COSTS	12.22
12.5.1	Capital Facility Cost and Phasing	12.22
12.5.2	Operations and Maintenance	12.23
12.6	SPECIFIC PLAN REQUIREMENTS	12.24
CHAPTER THIRTEEN: WASTEWATER TREATMENT AND COLLECTION SYSTEM		
13.1	INTRODUCTION	13.1
13.2	ASSUMPTIONS	13.1
13.3	WASTEWATER GENERATION	13.1
13.4	WASTEWATER TRUNK COLLECTION SYSTEM	13.4

13.5	WASTEWATER TREATMENT PLANT	13.6
13.5.1	Wastewater Treatment Process	13.6
13.5.1	Plant Design and Treatment Methods	13.7
13.5.2	Siting Criteria	13.9
13.6	ODORS	13.14
13.7	NONRESIDENTIAL DISCHARGES	13.16
13.8	SLUDGE DISPOSAL	13.16
13.9	REQUIREMENTS AND PERMITS	13.18
13.10	PHASING AND COSTS	13.18
13.10.1	Capital Facility Cost and Phasing	13.18
13.10.2	Operations and Maintenance	13.18
13.11	SPECIFIC PLAN REQUIREMENTS	13.19

CHAPTER FOURTEEN: WASTEWATER REUSE

14.1	INTRODUCTION	14.1
14.2	REGULATORY CONSIDERATIONS	14.11
14.3	EFFLUENT REUSE PLAN	14.11
14.4	REUSE OR DISPOSAL SITES	14.13
14.5	MULTIPLE USE OF RECLAMATION SITES	14.15
14.6	PHASING AND COSTS	14.16
14.6.1	Capital Facility Cost and Phasing	14.16
14.6.2	Operations and Maintenance	14.17
14.7	SPECIFIC PLAN REQUIREMENTS	14.17

CHAPTER FIFTEEN: STORM DRAINAGE AND FLOOD PROTECTION

15.1	INTRODUCTION	15.1
15.2	ANALYSIS AND DESIGN CRITERIA	15.1
15.3	OFF-SITE WATERSHEDS	15.1
15.4	PRIMARY STORM DRAIN COLLECTION SYSTEM	15.4
15.5	SECONDARY STORM DRAIN COLLECTION SYSTEM	15.7
15.6	MOUNTAIN HOUSE CREEK IMPROVEMENTS	15.7
15.7	BEST MANAGEMENT PRACTICES (BMP'S)	15.15
15.8	FLOOD PROTECTION	15.16
15.9	SITING CRITERIA	15.22
15.10	REGULATORY PERMITS	15.22
15.10.1	Corps of Engineers	15.22
15.10.2	California Department of Fish & Game	15.22
15.10.3	Central Valley Regional Water Quality Control Board	15.23
15.10.4	Central Valley RWQCB/NPDES General Permit	15.23

15.11	PHASING AND COSTS	15.23
15.11.1	Capital Facility Cost and Phasing	15.23
15.11.2	Operations and Maintenance	15.24
15.12	SPECIFIC PLAN REQUIREMENTS	15.24

IMPLEMENTATION

CHAPTER SIXTEEN: PUBLIC SERVICE PROVISIONS

16.1	BACKGROUND	16.1
16.2	ASSUMPTIONS	16.1
16.3	OBJECTIVE	16.2
16.4	POLICIES	16.2
16.5	IMPLEMENTATION	16.2
16.6	SPECIFIC PLAN REQUIREMENTS	16.4

CHAPTER SEVENTEEN: IMPLEMENTATION

17.1	INTRODUCTION	17.1
17.1.1	Sequence of Approvals	17.1
17.1.2	Implementation Measures	17.1
17.1.3	Sequence of Implementation	17.2
17.1.4	Principles of Implementation	17.2
17.2	TIMING OF IMPLEMENTATION MEASURES	17.3
17.3	COUNTY GENERAL PLAN AND DEVELOPMENT TITLE	17.4
17.4	COMMUNITY-WIDE PLANS	17.4
17.5	SPECIFIC PLANS	17.5
17.5.1	Purpose of Specific Plans	17.5
17.5.2	Specific Plan Contents	17.6
17.5.3	Specific Plan Amendments	17.6
17.5.4	Specific Plan Minimum Area	17.6
17.5.5	Specific Plans For Designated Areas	17.7
17.6	SPECIAL PURPOSE PLANS	17.8
17.7	DEVELOPMENT PERMITS	17.8
17.7.1	Definition of Development Permit	17.8
17.7.2	Exceptions to First Development Permit	17.9
17.8	PUBLIC PROJECTS	17.9
17.9	LAFCO PROCEEDINGS	17.9
17.10	ENVIRONMENTAL REVIEW	17.10
17.11	DEVELOPMENT AGREEMENTS AND PUBLIC SERVICES ALLOCATION AGREEMENT	17.10
17.12	PHASING	17.11

17.13	MONITORING	17.11
17.13.1	Community Monitoring	17.11
17.13.2	Community Data Collection	17.13
17.13.3	Fiscal and Financial Stability	17.13
17.13.4	Agricultural Mitigation Fee	17.14
17.14	ADMINISTRATION	17.14
17.15	INTERPRETATIONS, AMENDMENTS AND MINOR ADJUSTMENTS	17.18

List of Figures, Tables and Appendices

List of Figures - Master Plan

12 September, 1994

Figure #	Name/Description	Page
Exec. Sum.	Community Concept Diagram	
Exec. Sum.	Neighborhood Structure	
Exec. Sum.	Regional Vicinity Map	
Exec. Sum.	Project Location	
Exec. Sum.	Land Use Plan	
Exec. Sum.	Typical Neighborhood School and Park Layout	
Exec. Sum.	Residential Character - Concept	
Exec. Sum.	Town Center - Concept, View Looking Northwest	
Exec. Sum.	Business Park - Concept, View Looking Northwest	
Exec. Sum.	Mountain House Creek Community Park - Concept, View Looking Northeast	
Exec. Sum.	Old River Regional Park - Concept, View Looking West	
Figure 1.1	Regional Vicinity Map	1.5
Figure 1.2	Project Location	1.6
Figure 1.3	Master Plan Boundary	1.9
Figure 1.4	Ownership Map	1.10
Figure 1.5	1993 Cropping Patterns Map	1.11
Figure 1.6	Pre-Development Agricultural Water Supply	1.12
Figure 1.7	Pre-Development (1993) Circulation	1.13
Figure 1.8	Pre-Development (1993) Site Constraints	1.14
Figure 1.9	Williamson Act Status	1.17
Figure 3.1	Community Concept Diagram	3.2
Figure 3.2	Residential Neighborhood Boundaries Diagram	3.3
Figure 3.3	Community Subareas Map	3.4
Figure 3.4	Neighborhood Structure	3.6
Figure 3.5A	Land Use Plan	3.8
Figure 3.5	Land Use Plan	3.9
Figure 3.6	Land Use & Circulation Plan: North Area	3.10
Figure 3.7	Land Use & Circulation Plan: Central Area	3.11
Figure 3.8	Land Use & Circulation Plan: South Area	3.12
Figure 3.9	Pre-existing Residential Areas	3.18
Figure 3.10	Pre-existing Residential Areas/Enlargement at Grant Line Road	3.19
Figure 3.11	Residential Fronting Arterial Streets	3.34
Figure 3.12	Town Center Concept	3.37
Figure 3.13	Neighborhood Commercial Concept	3.41
Figure 3.14	Commercial/Freeway Service Concept	3.45
Figure 4.1	Community Edge Treatment Key Map	4.9
Figure 4.2	Community West Edge at Marina Boulevard	4.12
Figure 4.3	Community West Edge at Residential (Alternative 1 and 2)	4.13

List of Figures - Master Plan

12 September, 1994

Figure #	Name/Description	Page
Figure 4.4	Community West Edge at General Commercial	4.14
Figure 4.5	Community East Edge at Patterson Pass Road (Main Street to Byron)	4.17
Figure 4.6	Community East Edge at Patterson Pass Road (Mascot Boulevard to Main Street)	4.18
Figure 4.7	Community East Edge at Patterson Pass Road (Grant Line Road to Mascot Boulevard)	4.19
Figure 4.8	Community East Edge at Patterson Pass Road (Central Parkway to Grant Line Road)	4.20
Figure 4.9	Community East Edge at Patterson Pass Road (I-205 to Central Parkway)	4.21
Figure 4.10	Community East Edge at Byron Road (Wicklund Road to Patterson Pass Road)	4.22
Figure 4.11	Community East Edge at Public Use/General Industrial	4.23
Figure 4.12	I-205 Edge at Business Park	4.26
Figure 4.13	I-205 Edge at Residential	4.27
Figure 4.14	Community Southwest Edge at Residential	4.28
Figure 4.15	Community North Edge at Regional Park	4.30
Figure 4.16	Landscape Concept Diagram	4.34
Figure 5.1	Neighborhood Park and School Diagram	5.3
Figure 6.1	Fire Station Locations	6.4
Figure 7.1	Recreation and Open Space Plan	7.2
Figure 7.2	Open Space Destination and Linkages Plan	7.6
Figure 7.3	Neighborhood Park Concept	7.8
Figure 7.4	Mountain House Creek North and South	7.14
Figure 7.5	Mountain House Creek at Town Center	7.15
Figure 7.6	Old River Regional Park Diagram	7.21
Figure 7.7	Old River Regional Park Sections (Alternative 1 and 2)	7.22
Figure 7.8	Swainson's Hawk Sightings	7.34
Figure 7.9	1993 Tree Locations and Wetlands	7.42
Figure 8.1	Electrical Distribution Facilities Plan	8.2
Figure 8.2	Natural Gas Distribution Facilities Plan	8.7
Figure 8.3	Telecommunications Network Diagram	8.13
Figure 9.1	Freeway and Rail Improvements	9.7
Figure 9.2	Gateway with Allowed Level of Service D	9.11
Figure 9.3	Intersection Signalization and Channelization	9.17
Figure 9.4	Roadway Classification Diagram	9.22
Figure 9.5	Cross Section Index	9.23
Figure 9.6	Byron Road (Patterson Pass to Alameda County Line) - Major Arterial	9.24

List of Figures - Master Plan

12 September, 1994

Figure #	Name/Description	Page
Figure 9.7	Byron Road (Wicklund Road to Patterson Pass Road) - Major Arterial	9.25
Figure 9.8	Central Parkway - Minor Arterial	9.26
Figure 9.9	De Anza Boulevard - Minor Arterial	9.27
Figure 9.10	Grant Line Road (Between Patterson Pass Road and De Anza Blvd.) - Major Arterial	9.28
Figure 9.11	Grant Line Road (West of De Anza) - Major Arterial	9.29
Figure 9.12	Kelso Road - Minor Arterial	9.30
Figure 9.13	Main Street (Patterson Pass Road to De Anza Boulevard) - Major Arterial	9.31
Figure 9.14	Main Street (De Anza Boulevard to Central Parkway)	9.32
Figure 9.15	Main Street (at Village Green) - Minor Arterial	9.33
Figure 9.16	Main Street (West of Central Parkway) - Minor Arterial	9.34
Figure 9.17	Marina Boulevard (Adjacent to County Line) - Minor Arterial	9.35
Figure 9.18	Marina Boulevard (From County Line to Patterson Pass Road North) - Minor Arterial	9.36
Figure 9.19	Mascot Boulevard - Minor Arterial	9.37
Figure 9.20	Mountain House Boulevard - Minor Arterial	9.38
Figure 9.21	Patterson Pass Road (Central Parkway to I-205) - Major Arterial	9.39
Figure 9.22	Patterson Pass Road (Central Parkway to Grant Line Road) - Major Arterial	9.40
Figure 9.23	Patterson Pass Road (Grant Line Road to Mascot Boulevard) - Major Arterial	9.41
Figure 9.24	Patterson Pass Road (Mascot Boulevard to Main Street) - Major Arterial	9.42
Figure 9.25	Patterson Pass Road (Main Street to Byron Road) - Major Arterial	9.43
Figure 9.26	Patterson Pass Road (North of Byron Road) - Minor Arterial	9.44
Figure 9.27	Collector, Commercial/Industrial/Public	9.45
Figure 9.28	Residential Collector Steets	9.46
Figure 9.29	Local Residential Streets, Types I, II & III	9.47
Figure 9.30	Bicycle and Pedestrian Network	9.55
Figure 9.31	Bicycle and Pedestrian Walk and Path Standards	9.56
Figure 9.32	Transit Routes and Facilities Plan	9.58
Figure 9.33	Railroad Crossing Concept	9.64
Figure 11.1	Area of Potential Aircraft Noise Impact from Byron Airport	11.8
Figure 12.1	Riparian Water Rights Areas	12.3
Figure 12.2	Riparian Water Rights Areas/NW Area Enlargement	12.4
Figure 12.3	Water Supply Facilities	12.12
Figure 12.4	Conceptual Water Treatment Plant Site Layout	12.15
Figure 12.5	Water Distribution and Treatment Facilities Plan	12.18
Figure 13.1	Wastewater Collection and Treatment Facilities	13.5

List of Figures - Master Plan

12 September, 1994

Figure #	Name/Description	Page
Figure 13.2	Conventional Wastewater Treatment Plant -Diagram	13.11
Figure 13.3	Layout of Wastewater Treatment Site	13.12
Figure 13.4	Wastewater Treatment and Public Use Site Area	13.13
Figure 13.5	Odor Impacts of the Wastewater Treatment Facility	13.15
Figure 14.1	Staged Wastewater Re-use Locations	14.4
Figure 15.1	Off-Site Drainage Areas	15.2
Figure 15.2	Storm Drain Master Plan	15.6
Figure 15.3	Mountain House Creek (Off-Site)-Plan	15.8
Figure 15.4	Mountain House Creek Plan	15.9
Figure 15.5	Mountain House Creek Plan	15.10
Figure 15.6	Typical Creek Cross-Sections	15.11
Figure 15.7	Existing Flood Hazard Zones	15.18
Figure 15.8	Flood Protection Plan	15.19
Figure 15.9	Potential Sources of Flooding	15.20
Figure 15.10	Typical Flood Protection Levee Cross-Section	15.21

Mountain House Master Plan

List of Tables

9/16/94

Table #	Name/Description	Page
Table 1.1	Williamson Act Summary	1.16
Table 3.1	Land Use Program	3.13
Table 3.2	Neighborhood Summary	3.14
Table 3.3	Maximum and Minimum Residential Units by Neighborhood	3.27
Table 3.4	Implementing Zones for General Plan Land Use Designations	3.28
Table 3.5	Mountain House Jobs/Housing Analysis	3.54
Table 3.6	Analysis of Jobs/Housing Balance Over Time	3.56
Table 3.7	Analysis of Various Jobs/Housing Scenarios Over Time	3.57
Table 3.8	Impact of Residential and Commercial/Industrial Direct Construction Jobs	3.61
Table 3.9	Summary of Affordability Analysis	3.67
Table 3.10	Household Income Categories for Planned Units	3.68
Table 3.11	Affordability Index Goals Over Time	3.69
Table 5.1	Student Generation	5.1
Table 5.2	K-8 Students at Neighborhood Buildout	5.2
Table 7.1	Recreation and Open Space Areas	7.1
Table 7.2	Mountain House Park and Open Space Plan	7.3
Table 7.3	Proposed Swainson's Hawk Mitigation Program	7.35
Table 7.4	Costs for Recreational Facilities	7.45
Table 9.1	Freeway and Rail Improvements	9.6
Table 9.2	Schedule of Anticipated County Arterial Road Improvements	9.1
Table 9.3	Signalization at County Arterial Intersections	9.14
Table 9.4	Signalization at Community Arterial Intersections	9.15
Table 9.5	Channelization at Intersections	9.16
Table 9.6	Road Classifications and Standards	9.21
Table 9.7	Minimum and Maximum Parking Requirements	9.49
Table 9.8	Costs for Transportation Improvements	9.65
Table 9.9	Summary of Transportation Trigger Points Based on Occupied Residences	9.67
Table 10.1	Cross-References for Air Quality Issues	10.2
Table 11.1	Future Traffic Noise Levels Due to Buildout of the Master Plan	11.3
Table 11.2	Exterior Noise Standards for Noise-Sensitive Uses Affected by Non-Transportation Noise Sources	11.1
Table 12.1	Potable Water Demand	12.7
Table 13.1	Wastewater Generation - Average Daily Flow (ADF)	13.3
Table 14.1	Staged Wastewater Reuse Locations	14.4
Table 15.1	Off-site Watersheds - 100 Year Flow Rates	15.3
Table 15.2	Preliminary Design Flows for Mountain House Creek	15.7
Table 17.1	Generalized Mountain House Approval Process	17.3
Table 17.2	Required Approvals	17.16

Mountain House Master Plan

List of Appendices

9/16/94

Appendix #	Name/Description
CHAPTER APPENDICES	
Appendix 1-A	Definitions
Appendix 3-A	Job Creation Program
Appendix 3-B	Distribution of Housing and Affordable Housing
Appendix 4-A	Design Manual
Appendix 6-A	Mosquito Abatement
Appendix 7-A	Mountain House Creek Planting and Restoration Measures
Appendix 7-B	Habitat Management Plan (HMP)
Appendix 7-C	Kit Fox Pre-Construction and Construction Protocol
Appendix 12-A	Water Services Agreement Between Byron-Bethany Irrigation District and Mountain House CSD
Appendix 12-B	Design Criteria for Water Supply Facilities
Appendix 13-A	Wastewater Treatment System
Appendix 14-A	Wastewater Reclamation
Appendix 15-A	Storm Drainage Criteria
Appendix 15-B	Description of Mt. House Watersheds; Proposed Drainage Patterns and Regulatory Permits
Appendix 15-C	Sources of Flooding

Mountain House Master Plan

List of Background Reports

9/16/94

Appendix #	Name/Description
Chapter 1	Estimated Crop and Non-Crop Acreages
Chapter 1	Mountain House List of Existing Landowners (May 1993)
Chapter 1	Seismicity Information
Chapter 1	Soil Classifications and Soil Properties
Chapter 3	Jobs/Housing and Affordable Housing Background Report
Chapter 3	Jobs/Housing and Affordable Housing Methodologies and Absorption Estimates
Chapter 5	K-8 School Assessment
Chapter 7	The San Joaquin Kit Fox Report (Zentner)
Chapter 7	San Joaquin Kit Fox Review (Harvey)
Chapter 8	Mountain House Community Energy Element General Plan, May 1993
Chapter 9	Master Plan and Buildout ADT Volumes
Chapter 9	Freeway Improvement Analysis
Chapter 12	Riparian Water Rights Opinion
Chapter 12	BBID Historic Water Use Study
Chapter 12	Best Management Practices (BMPs) for Water Conservation
Chapter 12	Mountain House Community Water Transmission System
Chapter 15	Storm Drain System Analysis
Chapter 15	Procedure to Revise FIRM
Chapter 15	Minimum Levee Design Criteria
Chapter 15	Operation and Maintenance of Flood Control Facilities
Chapter 15	General Grading Guidelines

Executive Summary

EXECUTIVE SUMMARY

I	COMMUNITY CONCEPT	i
II	MASTER PLAN PURPOSE	iv
III	SETTING	v
IV	LAND USE	viii
V	DEVELOPMENT AND DESIGN	xi
VI	PUBLIC SERVICES	xi
	VI-1 Education and Child Care	xi
	VI-2 Public Health and Safety	xi
	VI-3 Recreation and Open Space	xvi
VII	PUBLIC INFRASTRUCTURE	xix
	VII-1 Energy and Telecommunications	xix
	VII-2 Transportation and Circulation	xix
	VII-3 Air Quality and Transportation Management	xix
	VII-4 Noise	xix
	VII-5 Potable Water Systems	xix
	VII-6 Wastewater Treatment and Collection	xx
	VII-7 Wastewater Reuse	xx
	VII-8 Storm Drainage and Flood Protection	xx
VIII	IMPLEMENTATION	xxi
	VIII-1 Public Service Provisions	xxi
	VIII-2 Implementation	xxi

List of Figures/Tables

Community Concept Diagram	ii
Neighborhood Structure	iii
Regional Vicinity Map	vi
Project Location	vii
Land Use Plan	ix
Typical Neighborhood School and Park Layout	xii
Residential Character - Concept	xiii
Town Center - Concept, View Looking Northwest	xiv
Business Park - Concept, View Looking Northwest	xv
Mountain House Creek Community Park - Concept, View Looking Northeast	xvii
Old River Regional Park - Concept, View Looking West	xviii
Table: Generalized Mountain House Approval Process	iv
Table: Land Use Program	x

EXECUTIVE SUMMARY

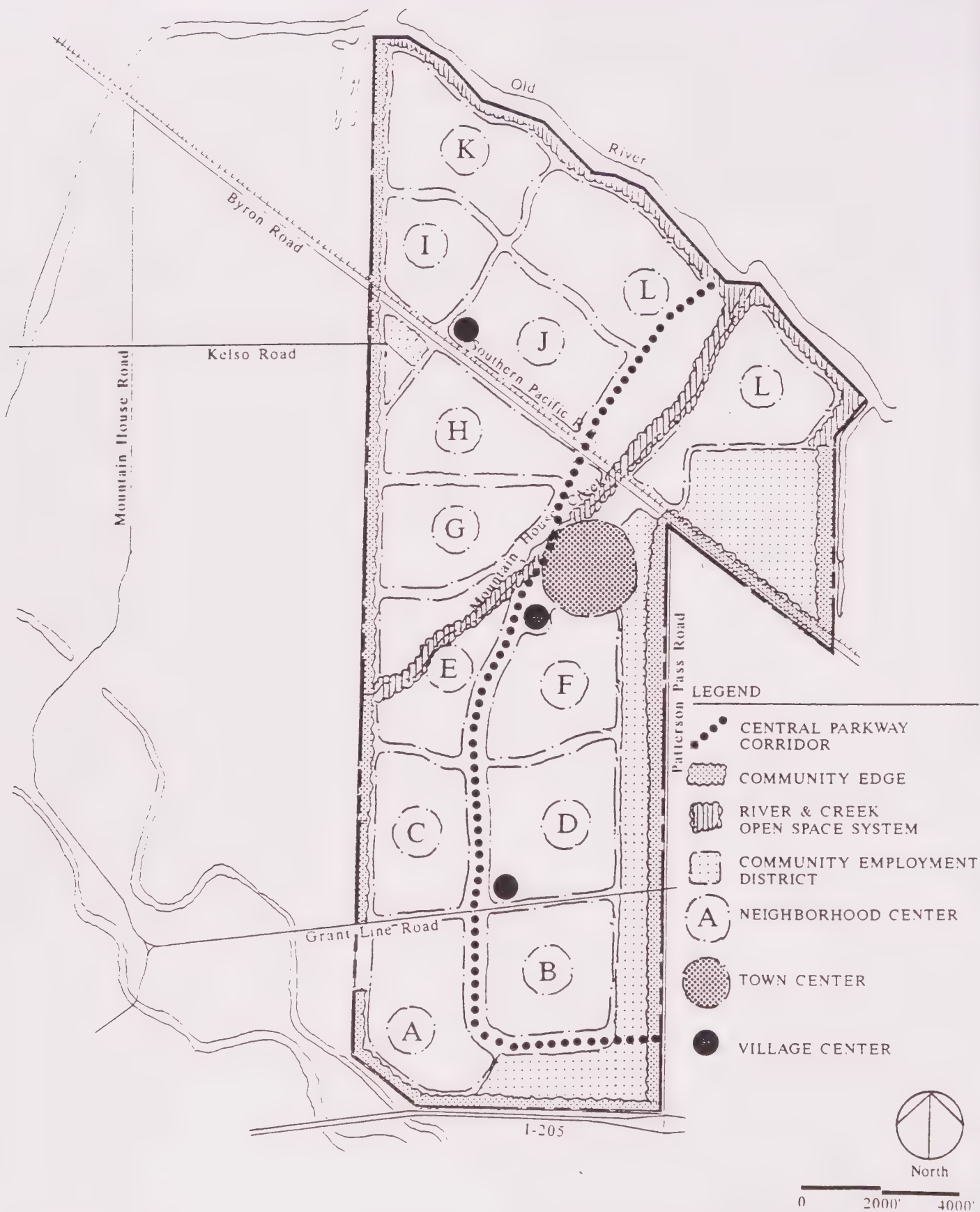
I COMMUNITY CONCEPT

Mountain House is envisioned as a new self-sufficient community offering employment, goods, services, and recreation. Land use and circulation are designed to encourage walking, bicycling, and transit use in a highly landscaped, visually attractive community.

Residential development at Mountain House consists of 12 neighborhoods, each organized around a Neighborhood Center containing a neighborhood park, a K-8 school, and a small commercial area. The neighborhoods will each have a separate identity, achieved through design and landscaping. Major shopping and other services will be met by the Village Centers and the Town Center, the civic and commercial focus of the community which is designated for mixed use commercial, office and residential development. Employment centers will include office and industrial parks. The Mountain House Creek corridor and the Old River edge will be enhanced as part of an overall parks and open space system.

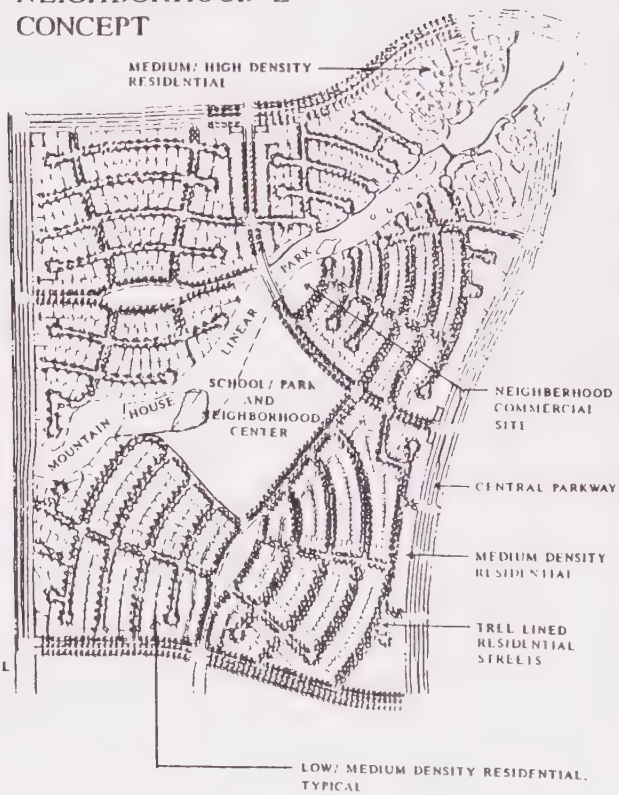
The following assumptions provide the basic framework used in the formation of the Master Plan.

- Mountain House will have an ultimate population of approximately 44,000 people. It will include approximately 16,000 dwelling units in 12 separate neighborhoods organized around Neighborhood Centers.
- Approximately 21,000 jobs will be provided in Mountain House at full buildout of the community.
- Mountain House will develop over a 20 to 40-year period.
- People of all economic levels will be able to find homes and jobs within the community.
- Land uses will establish a balance of housing, employment, and provide a full range of services and infrastructure while minimizing impact on agriculture and sensitive environmental resources.
- The community will be financially and fiscally viable, resulting in positive economic impact on the County.

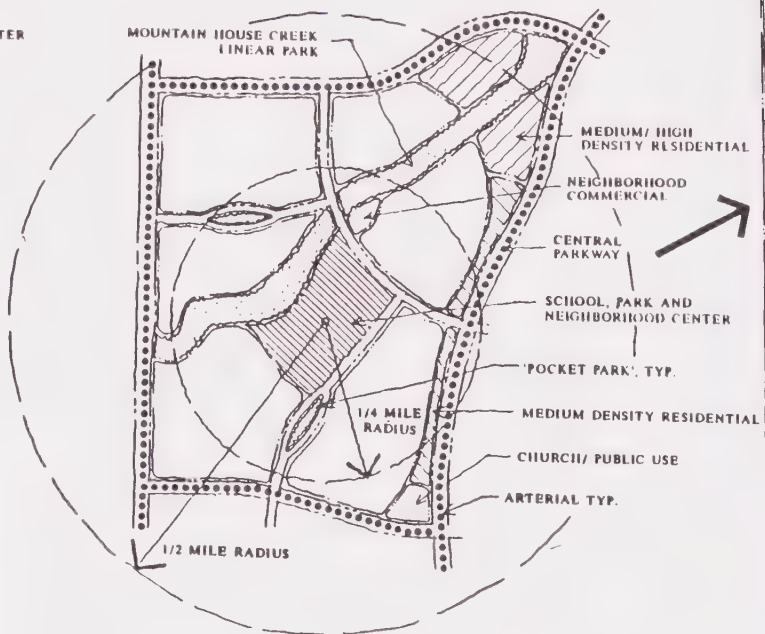


Source: SWA Group

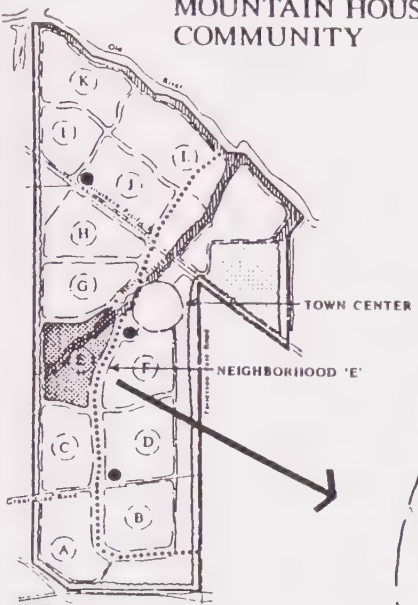
Community Concept Diagram

NEIGHBORHOOD 'E'
CONCEPT

NEIGHBORHOOD 'E' STRUCTURE



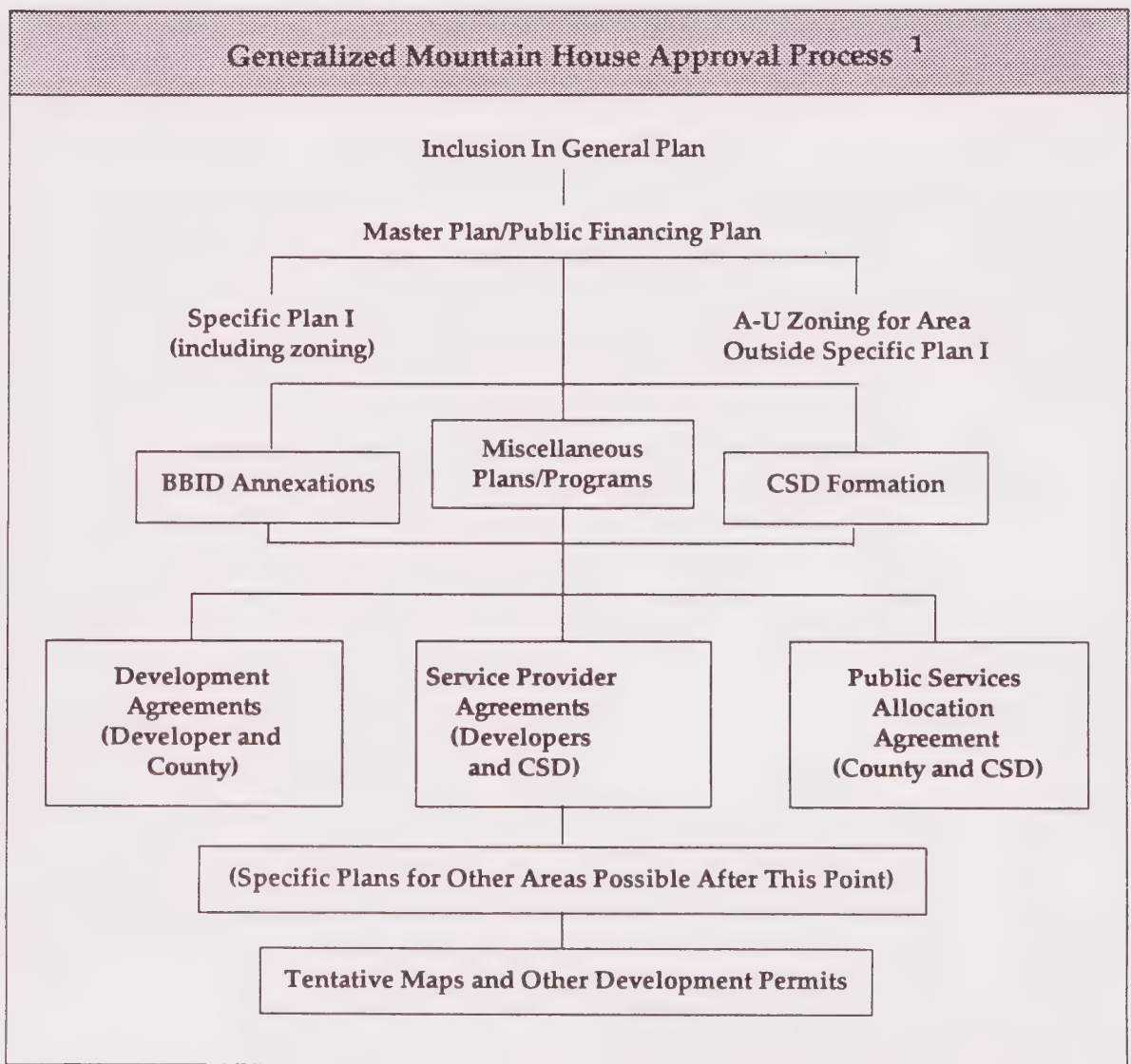
- SCHOOL / PARK CENTRALLY LOCATED
- 1/2 MILE MAXIMUM WALKING DISTANCE TO SCHOOL.
MINIMIZE ARTERIAL (FOUR LANE) CROSSINGS TO SCHOOL SITE

MOUNTAIN HOUSE
COMMUNITY

II MASTER PLAN PURPOSE

This Master Plan is intended to implement the General Plan amendment which added the new community of Mountain House to the San Joaquin County 2010 General Plan, as approved by the Board of Supervisors on February 25, 1993. The County certified a Final Environmental Impact Report (FEIR) on the entire project in 1992, and a Supplemental Environmental Impact Report (SEIR) in early 1993.

The Master Plan presents objectives, policies, implementation measures and standards for development of the new community. The plan and its appendices contain comprehensive plans for land use, infrastructure, environmental resources, public service provisions, and implementation. Also included is information on phasing, maintenance, and costs for infrastructure and services. The Master Plan is intended to serve as the overall community-wide policy document guiding subsequent Specific Plans, Tentative Maps, development projects, Development Agreements, and other approvals required to implement the proposed project.



1) This description does not include the CEQA Environmental Review process.

2) The initial development agreement may occur prior to development plans/programs

III SETTING

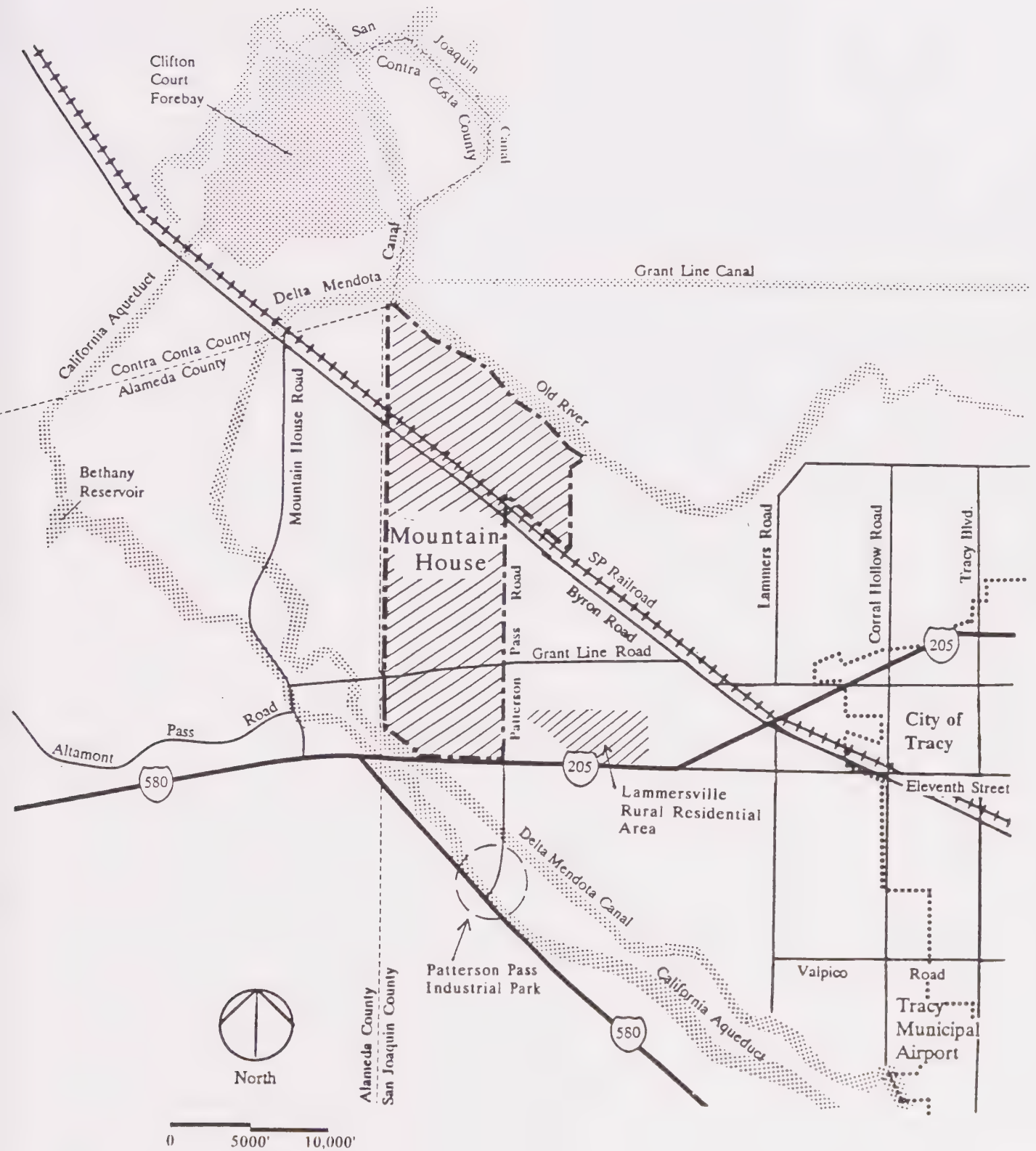
Mountain House consists of 4,784 acres or about 7.5 square miles located in southwestern San Joaquin County near the foothills of the Diablo range. Interstate 205 forms the southern boundary, Old River forms the northern boundary, and the Alameda County line runs along the western boundary. Along the eastern edge is Patterson Pass Road and the Wicklund Cut, an irrigation inlet off Old River. The 1993 city limits of Tracy are about 3.5 miles to the east, and the city of Livermore is located about nine miles to the west.

The project site has historically been used for field and row crop agriculture, with a smaller area in non-irrigated pasture and crop land. The remaining acreage includes scattered residences, roadways, the Southern Pacific railroad right of way, transmission lines and two large dairies. The existing landform consists of gently sloping terrain. Topographic features are limited to areas along Mountain House Creek, and the levee bordering Old River. The area supports a variety of plant and animal species, with the greatest diversity found in habitats located along Old River.

Major highway access is available from Interstate 580 and Interstate 205. Local road access is available via Grant Line Road, Patterson Pass Road, and Byron Road, all of which connect to I-205 and other points. A Southern Pacific Railroad line (the Mococo Line) traverses the northern portion of the Mountain House site, adjacent to the north side of Byron Road. The railroad is currently in limited use.

Agricultural water is supplied to the Mountain House area from the Byron Bethany Irrigation District and Westside Irrigation District. As of 1993, a total of 3,243.07 acres within the Mountain House site were under Williamson Act Contract. Notices of Non-renewal have been filed for 2,919.5 acres. On February 25, 1993, the Board of Supervisors approved the cancellation of Williamson Act Contracts for 418 acres to serve, together with adjacent land not under contract, as the first phase of development within Mountain House. No additional cancellations will be required.





Project Location

Source: SWA Group

IV LAND USE

In the tradition of California Central Valley towns, Mountain House is planned to develop as a community of pedestrian-scaled, tree-shrouded neighborhoods, each focused on a Neighborhood Center consisting of a neighborhood school, park and small commercial site. Neighborhood boundaries also delineate the attendance boundaries of each K-8 school.

The mixed use Town Center provides a focal point for civic and community activities and for commercial businesses. Three Village Centers provide nearby shopping and service needs as well as transit connections and facilities. Employment areas are concentrated near the I-205 freeway interchange, Patterson Pass Road, and in the northeast area along Byron Road. The community will be tied together with a central north-south parkway that connects destinations such as schools, commercial centers, the Town Center, and community and regional parks.

The land use plan and program shown below describe the categories and generalized location of land use for the entire Mountain House community. They set the land use framework for subsequent Specific Plans, and define the boundary limits of the community. Future Specific Plans will define the boundaries of land use areas more precisely.

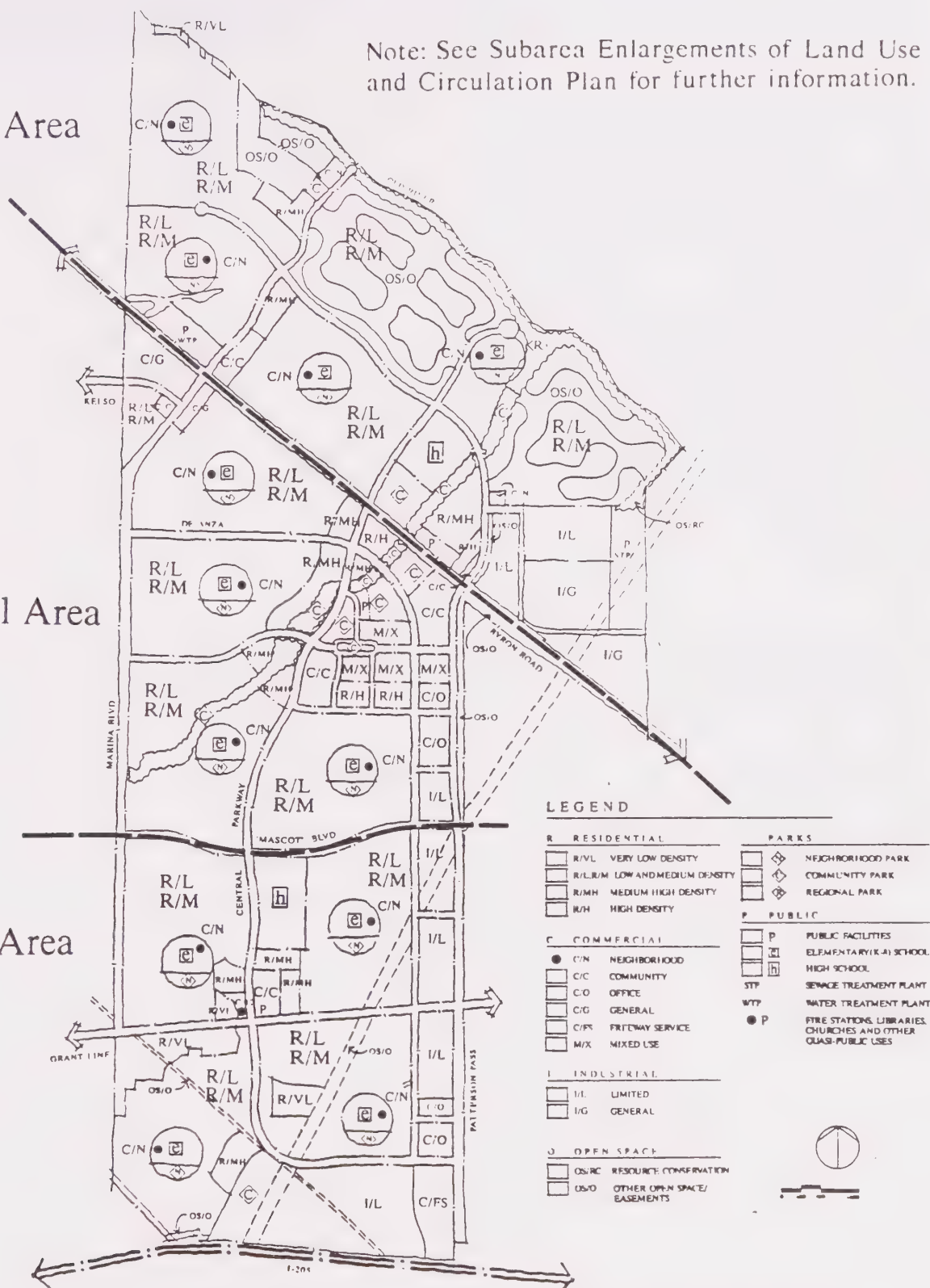
A primary goal of the Mountain House land use plan is to establish a close balance between employment and housing. The Master Plan discusses two distinct but interrelated programs: 1) the jobs/housing program, to ensure that jobs are available to working residents of the community; and 2) the affordable housing program, to ensure that homes are available and affordable to employees within the community.

Note: See Subarea Enlargements of Land Use and Circulation Plan for further information.

North Area

Central Area

South Area



NOTE: SEE FIGURE 9.4 FOR ROADWAY CLASSIFICATIONS

Land Use Plan

Land Use Program									
MASTER PLAN LAND USE	DENSITY (DU/ GROSS AC)	PERSON/ DU	JOBS/ AC	GROSS ACRES	% ACRES	DU	% DU	POP.	JOBS
Very Low Density (R/VL)(4)	0.5-2.0	3.12		76.0	3.0%	82	0.5%	256	
Low Density (R/L)	2.0-6.0	3.12		1,088.5	43.1%	4882	30.3%	15,232	
Medium Density (R/M)	5.5-10.0	2.70		1,153.5	45.7%	8217	51.0%	22,186	
Medium-High Density (R/MH)	10.0 - 15.0	2.00		159.5	6.3%	1914	11.9%	3,828	
Senior Housing (R/MH)	10.0 - 15.0	2.00		4.5	0.2%	54	0.3%	108	
High Density (R/H)	15.0 - 40.0	2.00		30.5	1.2%	549	3.4%	1,098	
Senior Housing (R/H)	15.0 - 40.0	2.00		11.5	0.5%	207	1.3%	414	
Town Center Residential (M/X)	-	2.00				200	1.2%	400	
TOTAL RESIDENTIAL				2,524.0	100.0%	16,105	100.0%	43,522	
Limited Industrial-North of Byron (I/L)			26.0	73.0	10.2%				1,898
Limited Industrial-South of Byron (I/L)(3)			32.3	258.0	36.0%				8,333
General Industrial (I/G)			14.0	110.0	15.4%				1,540
Community Commercial (C/C)			24.0	88.0	12.3%				2,112
Mixed Use (M/X)			51.0	43.0	6.0%				2,193
Neighborhood Commercial (C/N)			24.0	25.0	3.5%				600
General Commercial (C/G)			24.0	36.0	5.0%				864
Office Commercial (C/O)			44.0	56.0	7.8%				2,464
Freeway Service Commercial (C/FS)			24.0	27.0	3.8%				648
TOTAL COMMERCIAL/INDUSTRIAL				716.0	100.0%				20,652
Elem./Middle Sch. (12 @ 16 acres ea)			2.5	192.0					480
High School (2 @ 46.5 acres ea)			2.5	93.0					233
TOTAL SCHOOLS				285.0					713
Neighborhood Parks (NP)			0.2	60.0	7.9%				12
Community Parks (CP)			0.2	179.5	23.6%				36
Regional Parks (RP)			0.2	70.0	9.2%				14
Golf Courses (OS/O)			30/GC	298.0	39.2%				60
Marina/Other O.S. (OS/O)			10 EA	62.0	8.2%				10
Wetland (OS/RC) *				23.0	3.0%				
Landscape Buffers (OS/O)				3.0	0.4%				
Easements (OS/O)(5)				64.0	8.4%				
TOTAL OPEN SPACE AND RECREATION				759.5	100.0%				132
Wastewater / Service Yards (P)			5.0	50.0					250
Water Treatment Plant (P)			5.0	18.5					93
Transit Center and Public (P)			5.0	9.0					45
Institutional (P)			5.0	8.0					40
Major Street R.O.W.				378.0					
Railroad R.O.W.				36.0					
TOTAL PUBLIC				499.5					428
TOTAL MOUNTAIN HOUSE				4,784.0		16,105		43,522	21,925

(1) *Does not include 1.76 acres within the Mountain House Creek Corridor/Community Park,

(2) All figures are based upon planimeter measurements. Final figures may vary slightly.

(3) Includes areas to be zoned I/P that will have higher employment generating uses.

(4) Includes 52 existing residential units, plus 30 planned, additional units.

(5) Includes major electric and gas transmission easements through residential areas, and the drainage easement east of Patterson Pass Road. Other easements are included within public rights-of-way or private parcels.

Table revised 9/6/94

Plan dated 4/5/94

V DEVELOPMENT AND DESIGN

Development and design standards in the Master Plan provide a guide for all development within Mountain House to assure a high level of quality in the construction and operation of public and private buildings, open spaces and facilities. The community's image will be established through the consistent treatment of community wide elements such as landscaping and site graphics. The Master Plan and Appendix 4-A: Mountain House Design Manual present standards for issues such as lots and structures, grading, parking, signage, walls, furnishings, and siting criteria for community facilities.

Special design considerations include community edges, namely the west/agricultural edge, the east edge along Patterson Pass Road, the south/freeway edge, and the north/Old River edge. The Master Plan presents design criteria for each of these conditions.

The landscape treatment of proposed development and open space areas is also critical to establishing a high quality environment. The Master Plan and the Mountain House Design Manual present landscape concepts and policies for community and neighborhood areas, streets and entries, Town Center, schools, creek, employment areas, parking, and windbreaks.

VI PUBLIC SERVICES

VI-1 Education and Child Care

The Master Plan designates that a K-8 school be centrally located in each of the 12 proposed neighborhoods. Each new K-8 school will have shared use of adjacent neighborhood parkland. Two high schools are proposed to provide efficient access to all portions of the community.

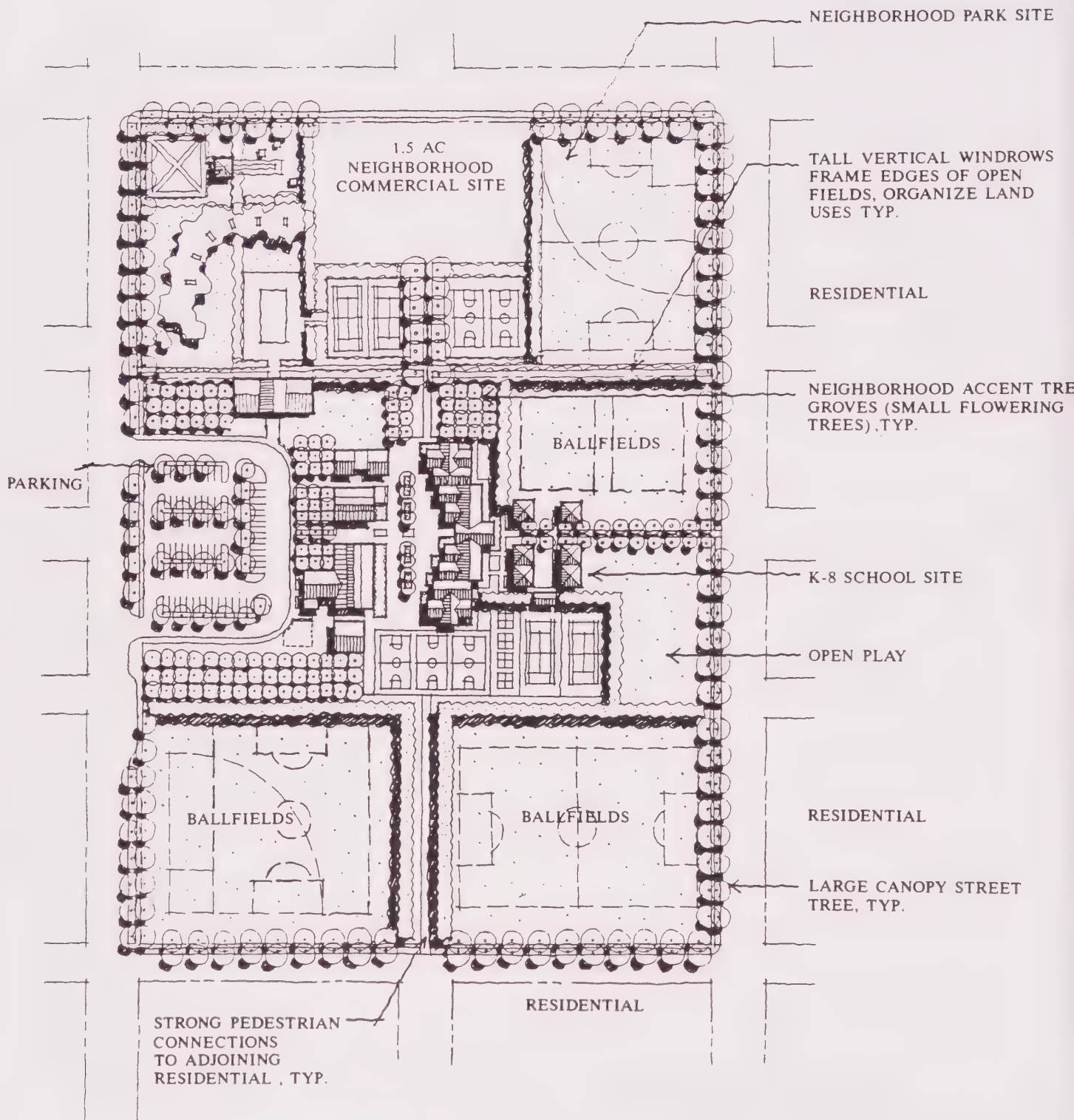
The school district will also provide additional facilities and services such as busing, administrative office space, and certain interim facilities, such as relocatable classrooms at existing schools. School corporation yards are provided in the public use area at Old River Industrial Park.

Day and after school child care facilities will be encouraged to locate within the community. Three child care sites will be allocated as part of Neighborhood Centers or Village Centers to serve the 12 neighborhoods, and other facilities will be encouraged to locate in business parks and adjacent to churches and commercial uses. A clearinghouse for day care information will maintain current files on day care providers.

VI-2 Public Health and Safety

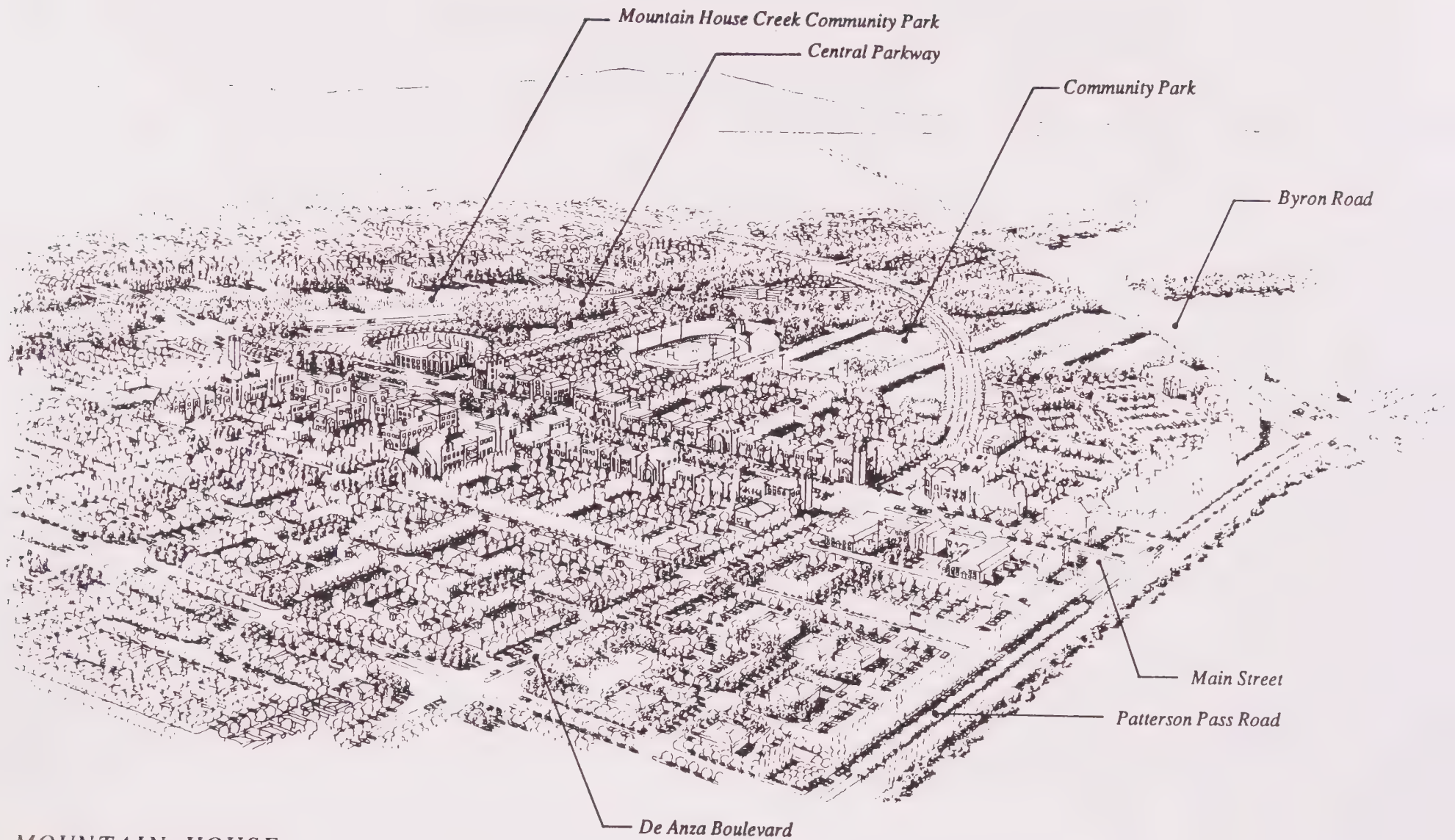
The Master Plan addresses the provision of services including police, fire, emergency response, and animal control. Medical facilities will be permitted to locate within the community at appropriate sites.

Waste collection, recycling, and hazardous materials management are addressed with reference to County and State programs. Other health and safety issues covered are fuel line and pipelines, pesticides and dairy waste from agricultural activities, soil erosion and geological hazards, abandoned oil and gas wells, electrical magnetic fields from transmission lines, and mosquito abatement.

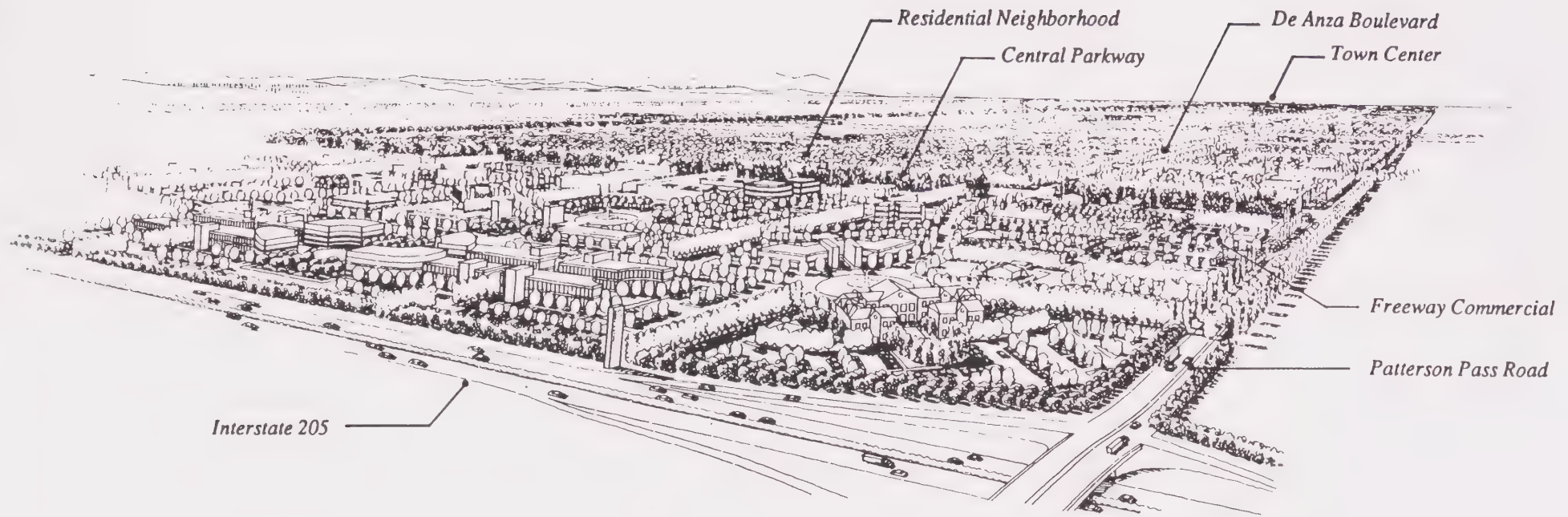




MOUNTAIN HOUSE
Residential Character



MOUNTAIN HOUSE
Town Center
View Looking Northwest



MOUNTAIN HOUSE
Business Park
View Looking Northwest

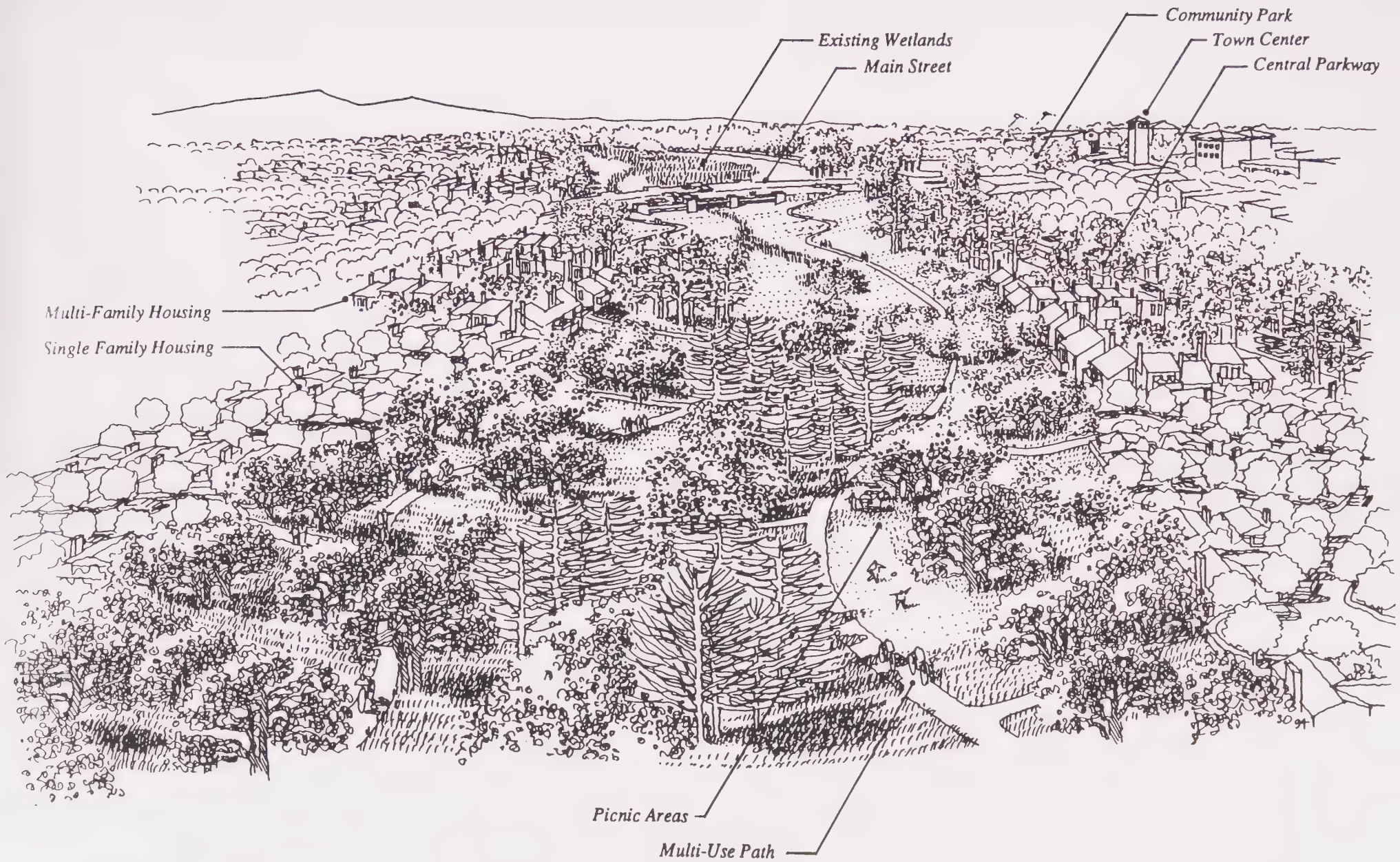
VI-3 Recreation and Open Space

The Master Plan locates a five-acre neighborhood park adjacent to K-8 schools at each of the 12 Neighborhood Centers. Community parks are concentrated along Mountain House Creek to establish a central open space spine and provide passive recreational opportunities, open space connections, wildlife and riparian habitat, and flood control. Other community parks provide active recreation and civic uses.

The Old River Regional Park utilizes the Old River levee for regional recreation, wildlife and native plant habitat, and flood protection. A network of trails and paths will provide pedestrian and bicycle connections to open space and other destinations within Mountain House as well as future potential regional trails.

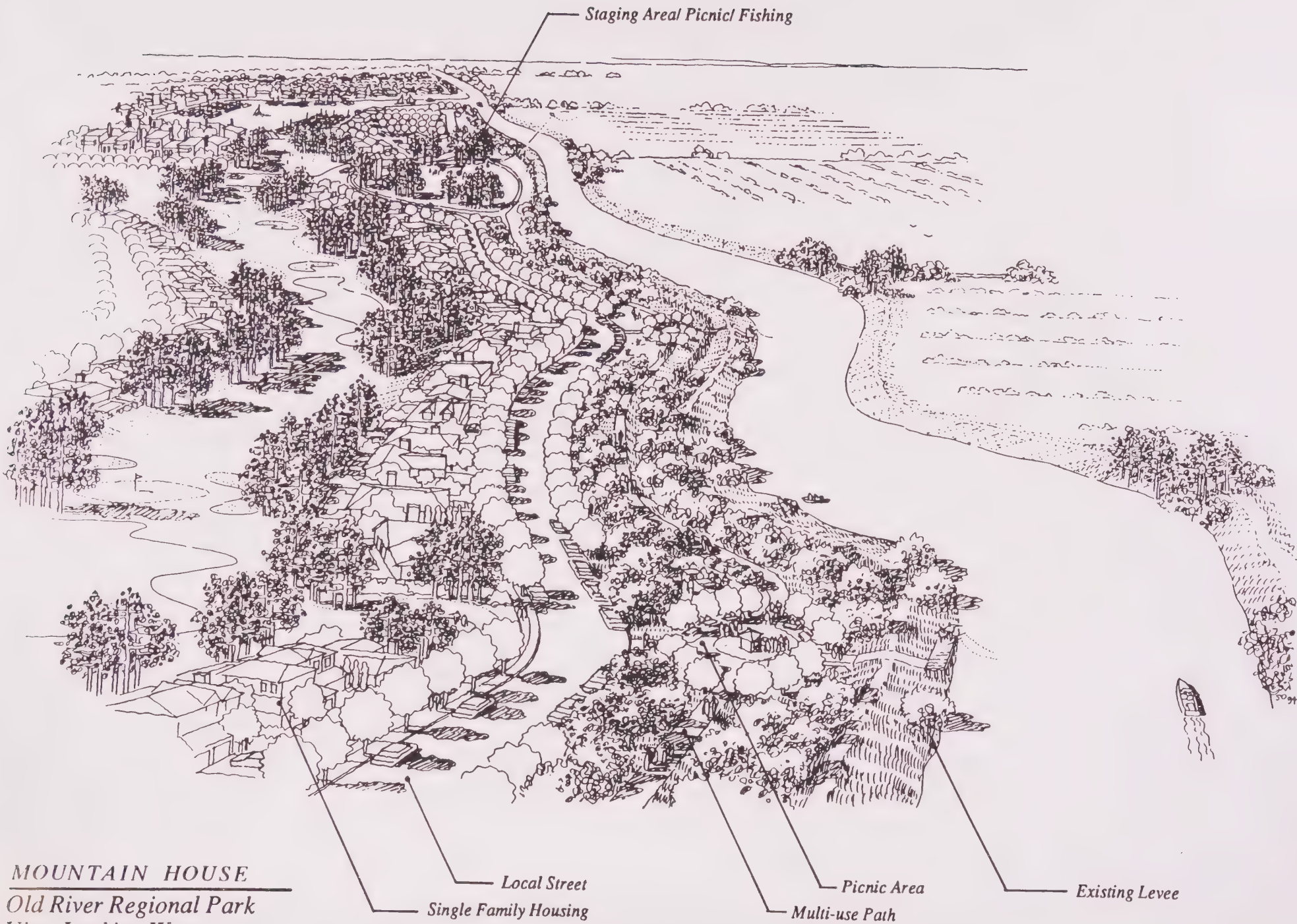
Private recreation uses include two golf courses north of Byron Road and a 60-acre marina located along Old River in the northwest corner of the Master Plan area. Other private recreation facilities are expected to be constructed as amenities within individual projects.

The Master Plan provides a Habitat Management Plan (HMP) combining water reclamation, agricultural preservation, and enhancement of wildlife values on agricultural lands adjacent to the community. The HMP provides habitat mitigation for Swainson's hawks, which will also benefit northern harriers and black-shouldered kites. The Master Plan also addresses other special-status species and the preservation of wetlands and existing trees.



MOUNTAIN HOUSE

Mountain House Creek Community Park
View Looking Northeast



Staging Area/ Picnic/ Fishing

MOUNTAIN HOUSE
Old River Regional Park
View Looking West

Local Street
Single Family Housing

Picnic Area
Multi-use Path

Existing Levee

VII PUBLIC INFRASTRUCTURE

VII-1 Energy and Telecommunications

The Master Plan addresses the provision of electricity and gas systems while considering public health risks. It also proposes measures to incorporate energy efficiency and alternative energy sources.

The telecommunications transport system will consist of a high speed digital fiber optics network. Modern telecommunications will enable residents to conduct many job and business functions from the home. Businesses will be served by high speed facilities to provide telecommuting via multi-line telephone service, low and high speed data, and video conferencing.

VII-2 Transportation and Circulation

The Master Plan provides for transportation facilities to serve the new community, including roadways within and outside the project site. On a "fair-share" basis, the community will participate in the implementation of freeway and Arterial roadway improvements. The Master Plan addresses on-site circulation issues such as levels of service, design considerations, maintenance, and parking.

Also discussed are strategies to reduce traffic impacts by utilizing public transit, transportation demand management, and land use configurations that encourage non-automobile circulation. Bicycling and pedestrian facilities provide a comprehensive network to reduce vehicular traffic and provide for recreation. Bus transit service will be provided locally within the community and to major regional destinations. Transit stations with park-and-ride lots will be located at Neighborhood Centers, Village Centers, the Town Center and a primary intermodal center. Also addressed are rail transit and roadway crossings of the Mococo rail line.

VII-3 Air Quality and Transportation Management

The primary air quality impact is that of transportation, especially single occupant vehicles. Telecommuting, alternative transportation modes, and effective community design will be promoted to reduce automobile trips. The Master Plan calls for a Transportation Demand Management (TDM) plan for complying with the trip reduction ordinance of the San Joaquin Valley Air Basin. Also addressed are the use of cleaner fuel vehicles, dust and emissions control during construction, and specific measures to reduce air emissions from homes and buildings.

VII-4 Noise

The Master Plan summarizes the existing noise sources affecting the area, identifies applicable land use compatibility noise level criteria, and provides guidelines for evaluating and mitigating noise impacts from mobile and stationary noise sources. Noise control techniques include setbacks and barriers, site design, and building design.

VII-5 Potable Water Systems

The Master Plan provides for a safe, reliable and sufficient water supply. Measures include water supply facilities for pumping, conveyance, storage and treatment, adequate standards, and water conservation practices and water-conserving appliances, plumbing, and landscaping.

Raw or untreated water will be provided by the Byron Bethany Irrigation District (BBID) via their pre-1914 appropriative water right to divert water from the Sacramento-San Joaquin Delta and to a small degree by riparian water currently drawn from Old River. To maintain a supply of irrigation water to lands under agricultural use, continued irrigation water service will be provided to the area of land within the BBID service area located east of the area. Water for the new community will be piped to a new water treatment plant to be located near Byron Road at the County line.

VII-6 Wastewater Treatment and Collection

The wastewater system will include a wastewater collection, treatment and disposal system to serve the community. Approximately 80% of the service area will drain by gravity through a backbone collection system to the treatment plant. The remaining 20% must be pumped to the treatment plant through lift stations and force mains. The treatment facilities will include facultative lagoons, preliminary treatment, activated sludge treatment, primary clarification, disinfection, effluent storage and finally farmland irrigation. The Master Plan addresses issues such as siting criteria and odor control.

VII-7 Wastewater Reuse

The most beneficial use of reclaimed water at Mountain House is for agricultural irrigation applications. 100% of the wastewater produced by the Mountain House community is planned for reclamation and reuse as irrigation water on nearby farmlands. The proposed effluent reuse plan consists of pumping treated effluent to storage ponds which are then used to supply nearby farms through the farm's irrigation system. Farms used for effluent disposal may also be used for wildlife mitigation.

VII-8 Storm Drainage and Flood Protection

The Master Plan describes the community's storm drain collection system, including off-site watershed, primary storm drain facilities, secondary storm drain facilities, Mountain House Creek, Best Management Practices treatment, flood protection, and phasing of the storm drain collection system.

The primary storm drainage systems provides for the conveyance of all off-site and on-site precipitation, plus any urban runoff, to the Old River. The secondary system will collect and convey on-site drainage to the primary storm system.

Mountain House Creek will serve as a multi-use corridor for drainage conveyance, wildlife habitat and recreation, while minimizing the deposition of sediment into Old River.

The entire community will require protection from a 100-year flood. Measures to protect from flood hazards include construction of a new levee system adjacent to the existing levees on Old River.

VIII IMPLEMENTATION

VIII-1 Public Service Provisions

The existing governments of San Joaquin County do not provide the full range of urban services and facilities that will be needed by the future residents of Mountain House. Therefore, San Joaquin County will form a Community Services District (CSD) for the purpose of providing selected services that are not provided by other agencies. The Master Plan addresses the formation, service agreements, operational criteria, and other essential aspects of the CSD.

San Joaquin County will have authority over land use planning and building and safety, the administration of justice, the provision of human services, integrated waste management, and other powers. The CSD will contract with the County Sheriff's Department to provide police protection and with the Tracy Rural Fire Protection District for fire protection. Educational services are to be provided by the Lammersville Elementary School District and the Tracy Joint Union High School District.

VIII-2 Implementation

The Master Plan addresses the implementation and administrative issues required for the new community. Phasing of development and timing of implementation measures are set forth for County and other agency approvals and processes. An explanation of procedures for administration of the Master Plan is also provided. This section also defines requirements for future Specific Plans and other subsequent plans and agreements, describes environmental review requirements, and summarizes monitoring programs associated with administration of community programs.

insert perspectives

Goals and Development

CHAPTER ONE



MASTER PLAN INTRODUCTION

CHAPTER ONE: MASTER PLAN INTRODUCTION

1.1	MASTER PLAN PURPOSE AND FUNCTION	1
1.1.1	Purpose of the Master Plan	1
1.1.2	Relationship to the Public Financing Plan	2
1.1.3	Relationship to Future Specific Plans	2
1.1.4	How to Use the Master Plan	2
1.2	PLANNING CONTEXT	3
1.2.1	Planning History and Environmental Review	3
1.2.2	Relationship to County Planning Documents	4
1.2.3	Controlling Document	4
1.2.4	Master Developer Responsibility	7
1.3	SITE DESCRIPTION	7
1.3.1	Location	7
1.3.2	Pre-Development Land Ownership Patterns (1993)	7
1.3.3	Pre-development Land Use and Infrastructure (1993)	7
1.3.4	Williamson Act Contracts	15
1.4	ENVIRONMENTAL SETTING	18
1.4.1	Site History	18
1.4.2	Visual Character	18
1.4.3	Vegetation and Wildlife	18
1.4.4	Wetlands	19
1.4.5	Hydrology and Drainage	19
1.4.6	Flood Zones	20
1.4.7	Geology and Soils	20
1.4.8	Public Health and Safety	21

List of Figures

Figure 1.1: Regional Vicinity Map	5
Figure 1.2: Project Location	6
Figure 1.3: Master Plan Boundary	9
Figure 1.4: Ownership Map	10
Figure 1.5: 1993 Cropping Patterns Map	11
Figure 1.6: Pre-Development Agricultural Water Supply	12
Figure 1.7: Pre-Development (1993) Circulation	13
Figure 1.8: Pre-Development (1993) Site Constraints	14
Figure 1.9: Williamson Act Status	17

List of Tables

Table 1.1: Williamson Act Summary	16
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CHAPTER ONE: MASTER PLAN INTRODUCTION

1.1 MASTER PLAN PURPOSE AND FUNCTION

1.1.1 Purpose of the Master Plan

The Master Plan for Mountain House presents policies, ~~requirements~~ and standards for development of the new community. It contains comprehensive plans for land use, infrastructure and implementation. The Master Plan is intended to serve as the overall community-wide policy document guiding subsequent Specific Plans, Tentative Maps, development projects, Development Agreements, and other approvals required to implement the proposed project. All subsequent development approvals must be consistent with the Master Plan.

The Master Plan includes the following:

- a. The community concept, land use program, standards, and assumptions for the new community;
- b. Objectives and policies for the development of the community;
- c. Overall design and development standards for community elements including the Town Center, neighborhoods, roadways, parks and other open space uses, and utilities;
- d. Facility needs for roads, water, sewer drainage and flood control facilities, and other infrastructure or services;
- e. The backbone infrastructure systems and service areas required to support the community, and minimize future reconstruction;
- f. Environmental protection measures;
- g. Implementation measures including additional studies/plans, phasing, maintenance, financing and reimbursement for infrastructure and services;
- h. The public services and governance systems proposed for the new community;
- i. Costs of infrastructure and public facilities, and operating and capital costs for use in the financing plan;
- j. Requirements and procedures for successive Specific Plans, zoning, Subdivision Maps, development projects, other permits, design review, environmental review, and Development Agreements;
- k. Appendix material on definitions, background studies, comprehensive technical regulations and other resources.

1.1.2 Relationship to the Public Financing Plan

The Public Financing Plan (PFP) is a separate document identifying needed public services, facilities, and funding alternatives to implement the Master Plan. The PFP incorporates applicable Goals and Policies from the County General Plan, and is based upon the policies, land use data, public facility and service standards, cost estimates and phasing plans identified in this Master Plan.

The Public Financing Plan establishes fiscal and financial objectives, policies and guidelines. It identifies funding programs for community-wide costs for facilities and services. It also provides a fiscal analysis to ensure that the community can be feasibly developed without negative fiscal impacts on the County.

Due to the volatile nature of fiscal and financial issues, many changes may be needed to the Public Financing Plan through the buildout of the community. An annual report will evaluate the success of the fiscal and financial programs.

The Public Financing Plan prepared in association with this Master Plan addresses the entire Mountain House community in one comprehensive analysis. Each Specific Plan will be accompanied by a fiscal and financial analysis. All subsequent Development Permits must be consistent with the Public Financing Plan.

1.1.3 Relationship to Future Specific Plans

While the Master Plan is the community-wide plan for development, subsequent Specific Plans will cover smaller areas. Specific Plans will be required on all lands to provide additional provisions on land use, design, infrastructure, and implementation that have not been included in the Master Plan and are necessary before specific developments are designed. Each Specific Plan must be consistent with the land use assumptions, requirements and policies laid out in the Master Plan.

Chapter Seventeen: Implementation describes the requirements and criteria for Specific Plans at Mountain House. Contents required to be included in Specific Plans are listed at the end of each chapter of this Master Plan.

1.1.4 How to Use the Master Plan

Chapter Two: Community Vision, presents the overall goals and objectives for the new community. Subsequent chapters are divided into sections and subsections which address the various issues. Most sections begin with a brief discussion, including cross-references to the other chapters and appendices, and a statement of assumptions used in the formation of the specific topic. Regulatory provisions are presented as one of the following:

Objectives: An objective describes a specific end condition that represents an intermediate step to achieving a goal stated in Chapter Two. Each section begins with one or more objective, which are to be accomplished by the policies and implementation measures that follow.

Policies: A policy is a specific statement that guides decision-making. It implements and is more detailed than objectives, and it is effectuated by implementation measures.

Implementation Measures: An implementation measure is an action, procedure, program or technique that carries out a policy. Implementation measures typically spell out required actions or approvals, programs, timing, or similar requirements.

Where applicable, chapters contain a section on phasing and costs. These discussions represent summaries of material contained in the Public Financing Plan (PFP), a companion document to this Master Plan.

The Master Plan appendices consist of support reference documents such as a list of definitions, background information on the site, programs for affordable housing and job creation, a plan for habitat management, and other technical reports and programs. Appendices are organized to relate to chapters by numbering the appendices to correspond with the relevant chapter number (e.g. appendices for Chapter Fifteen are numbered 15-A and 15-B). Appendix 1-A provides a list of definitions applicable to the Master Plan. The Mountain House Design Manual (Appendix 4-A) includes guidelines and development standards for buildings, landscaping, noise control, signage, walls and fences, lighting and site furnishings.

Applicants for approval of a subdivision or development within Mountain House are required to comply with the regulations policies of this Master Plan and those contained within the Specific Plan in which the subject property is located. A description of the application process is contained in Chapter Seventeen: Implementation. Financial and fiscal requirements and procedures are contained in the Master Plan Public Financing Plan.

This Master Plan assigns preliminary names to streets and other features of the new community. These place names are for working purposes only. Final names will be determined at the appropriate point in the planning and review process.

1.2 PLANNING CONTEXT

1.2.1 Planning History and Environmental Review

This Master Plan is intended to implement the General Plan Amendment which added the new community of Mountain House to the San Joaquin County 2010 General Plan, as recommended by the County Planning Commission on February 4, 1993 and approved by the Board of Supervisors on February 25, 1993. At that time, the Board of Supervisors also certified the Supplemental Environmental Impact Report (SEIR) prepared for this project. The Master Plan was prepared in compliance with the "subsequent plans" process adopted by the Board of Supervisors for New Communities.

The San Joaquin County Community Development Department initiated review of the Mountain House General Plan Amendment in 1990, and the Final Environmental Impact Report (FEIR) was published in March 1992, recommended for approval by the County Planning Commission on April 9, 1992, and certified by the Board of Supervisors on July 29, 1992. Since the FEIR addressed an amendment to the 1995 General Plan, the SEIR was prepared to review a revised application requesting amendment to the 2010 General Plan. The SEIR is one environmental review document in a tiered environmental review process established by the County for Mountain House.

Prior to the current boundaries of the Master Plan area, previous proposals also addressed lands located in Alameda County. The area addressed by this Master Plan is

entirely located within the unincorporated area of San Joaquin County (see Figures 1.1: Regional Vicinity Map and 1.2: Project Location). During preparation of the Master Plan, the acreage of the project was determined to be 4,784 acres based upon field surveys and the inclusion of additional existing street rights of way and several small former out-parcels.

1.2.2 Relationship to County Planning Documents

San Joaquin County General Plan

The General Plan 2010 policies require a Master Plan, a Public Financing Plan, and Specific Plans for a new community. All these plans, as well as Development Agreements for Mountain House must be consistent with the San Joaquin County General Plan as amended. As more detailed planning is done for Mountain House, the General Plan may need to be amended.

Development Title and other County Ordinances

Provisions of the San Joaquin County Development Title and other County ordinances and standards shall apply to Mountain House unless specifically excepted by the Master Plan, the Public Financing Plan, Specific Plans or Development Agreements.

Development Agreements

Development agreements are contracts established between the County and the master developer or other developers of Mountain House. ~~The Mountain House Community Services District (CSD) may also be party to a Development Agreement with the County and/or the master developer.~~

Development agreements may be used to implement the project by assuring such issues as fiscally sound land use designations and densities, construction of needed infrastructure, dedication of land for public open space and other public purposes, and establishment of the specific responsibilities of the contracting parties. ~~The Development Agreements may also include other provisions relating to implementation, such as conditions and restrictions or future discretionary actions by both parties.~~ Development agreements are generally long term in duration, and items included in a Development Agreement may not be affected by future changes in County policies. ~~may not affect valid Development Agreements.~~

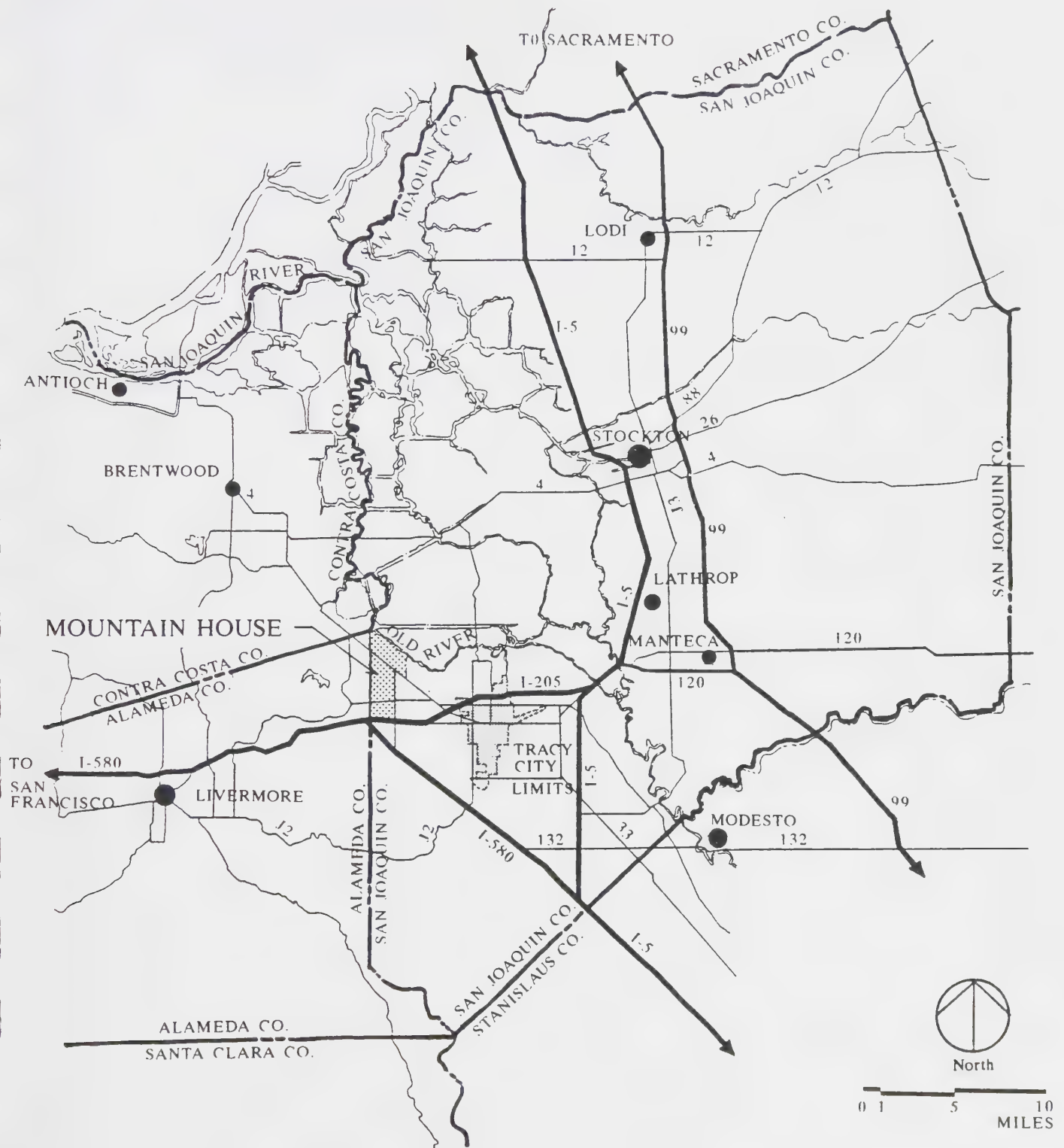
A Development Agreement is a discretionary, legislative act and subject to the approval of the County Board of Supervisors, and must be consistent with the County's General Plan, Master Plan, Public Financing Plan, and Specific Plan which it implements.

1.2.3 Controlling Document

Where the Mountain House plans or agreements differ from the Development Title or other ordinances, the approved Specific Plan, Master Plan, or Development Agreement shall govern.

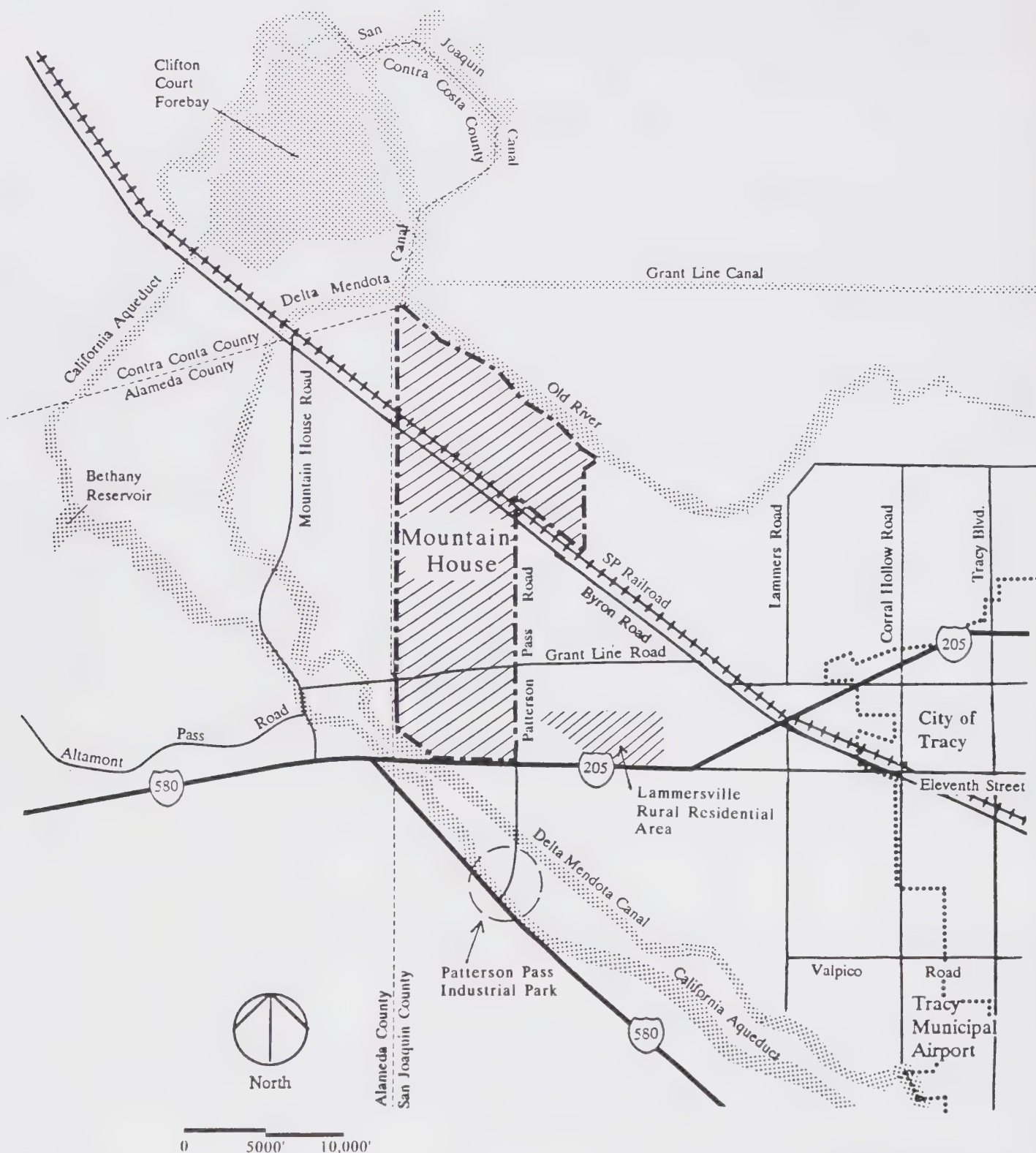
Other Agreements

The County will need to enter into an agreement with a Mountain House Community Services District (CSD) to define what services each agency provides. The CSD will also enter into agreements with other agencies and developers.



Source: SWA Group

Regional Vicinity Map



Source: EIR/Baseline

Project Location

September 16, 1994

Chapter One: Master Plan Introduction

1.2.4 Master Developer Responsibility

The Master Developer for Mountain House is Trimark Communities. Trimark was the applicant for the previous General Plan Amendment process that established the land use designations for the new community, and it was also the applicant funding the establishment of the Master Plan.

The Master Plan has been prepared without consideration of pre-development property locations or ownership, but rather in consideration of the best assignment of those land uses that will result in an efficient and desirable community character. Buildout of the community will require close cooperation between owners of lands with overlapping uses, access and infrastructure requirements.

The first phase of development will probably occur entirely within lands controlled by the Master Developer. Costs of preparation of the Master plan, Financing Plan, and Specific Plans will be reimbursed as specified in the Financing Plan.

1.3 SITE DESCRIPTION

1.3.1 Location

Mountain House consists of 4,784 acres or about 7.5 square miles located in southwestern San Joaquin County. Interstate 205 forms the southern boundary, Old River forms the northern boundary, and the Alameda County line runs along the western boundary. Along the eastern edge is Patterson Pass Road and the Wicklund Cut. The 1993 city limits of Tracy are about 3.5 miles to the east, and the city of Livermore is located about nine miles to the west (see Figures 1.2: Project Location and 1.3: Master Plan Boundary).

1.3.2 Pre-Development Land Ownership Patterns (1993)

As of January 1, 1993, the Master Developer, Trimark Communities, owned or controlled approximately 72% of the Mountain House area (see Figure 1.4: Ownership Map). ~~Appendix 1-B: Mountain House List of Existing Landowners presents a map and list of~~ ~~ownerships for lands within the project boundary, as of May 1993.~~

1.3.3 Pre-development Land Use and Infrastructure (1993)

Pre-development Land Use

The project site consists of agricultural lands extending from I-205 northward to Old River. Much of the acreage is used for field and row crop agriculture, with a smaller area in non-irrigated pasture and crop land (see Figure 1.5: 1993 Cropping Patterns Map). The remaining acreage includes scattered residences, roadways, the Southern Pacific railroad right of way, transmission lines and two large dairies.

A number of existing residences occur within or near the Mountain House area. Grant Line Village consists of several homes located along Grant Line Road. The majority of the residences are located south of Grant Line Road, with approximately 5.5 acres located north of Grant Line. Approximately 15 homesites exist adjacent to Old River in the northwestern corner of the Mountain House area. Two ~~small newer~~ homes exist at the northwest corner of Bethany and Henderson Roads. Several other rural residences are scattered throughout the Master Plan area.

The Livermore Yacht Club and Del's Boat Harbor are located in Alameda County, a quarter mile west of the northwest corner of the Master Plan area. Access to these boating facilities is via Lindeman Road from Byron Road.

Agricultural Water Supply

Agricultural water is supplied to Mountain House from the Byron Bethany Irrigation District (2,900 acres) and Westside Irrigation District (about 200 acres). About 10 acres near I-205 are within the Plain View Irrigation District, which currently delivers no water to that area. Riparian water rights to Old River provide irrigation supplies for approximately 1420 acres of land adjacent to the river. Approximately 115 acres in the southwestern corner of the site currently have no agricultural water supplies except for groundwater, and agricultural uses are limited to grazing or other dry-farming activities. The remainder of the site consists of roads and the railroad right-of-way with no water rights.

Primary water delivery canals servicing the site are located along the 70-foot, 120-foot and 155-foot elevation contours (see Figure 1.6: Pre-Development Agricultural Water Supply). The canals are piped beneath Mountain House Creek and laterals branch off the main canals.

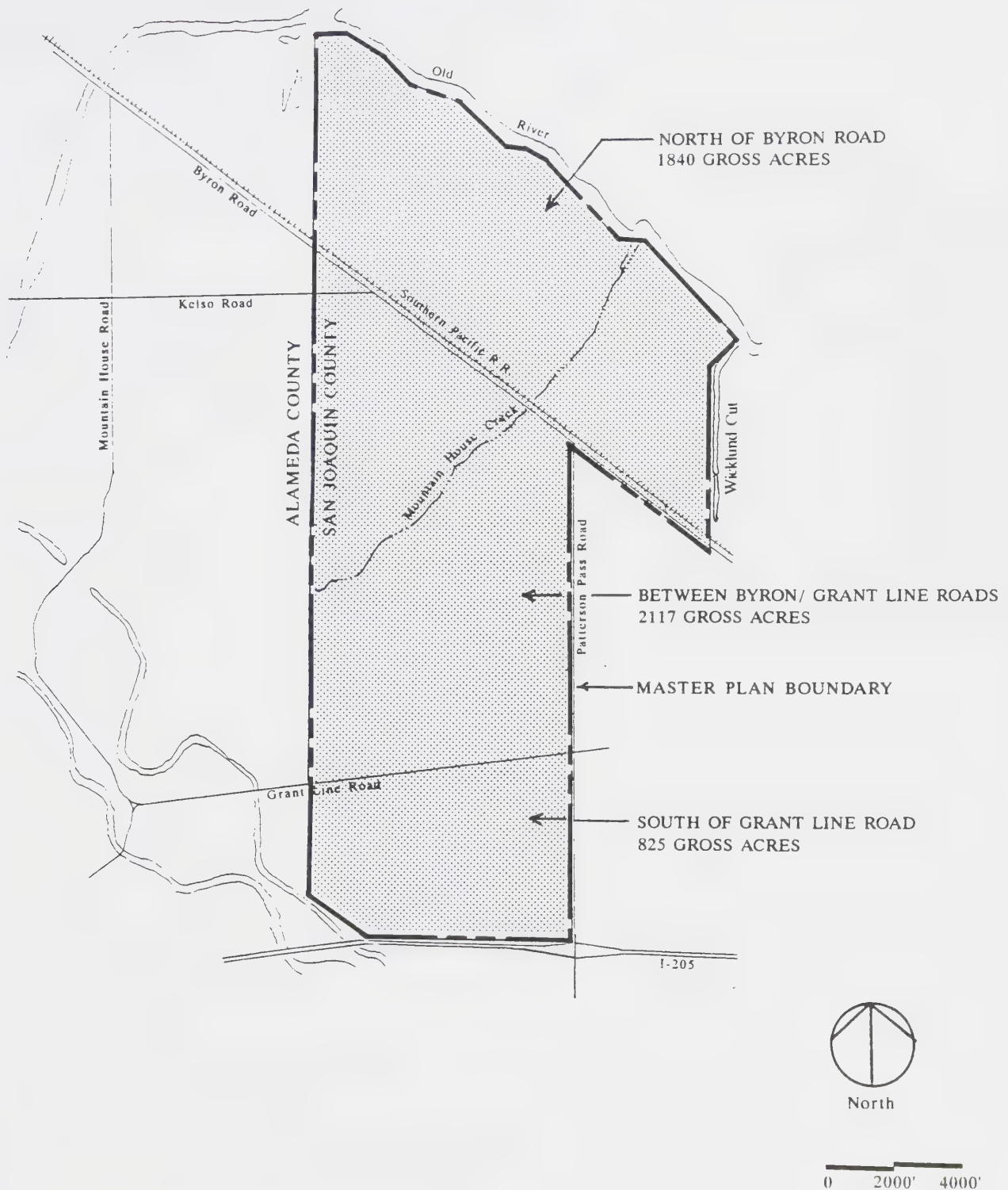
Further information on water supply is provided in Chapter Twelve: Potable Water Systems.

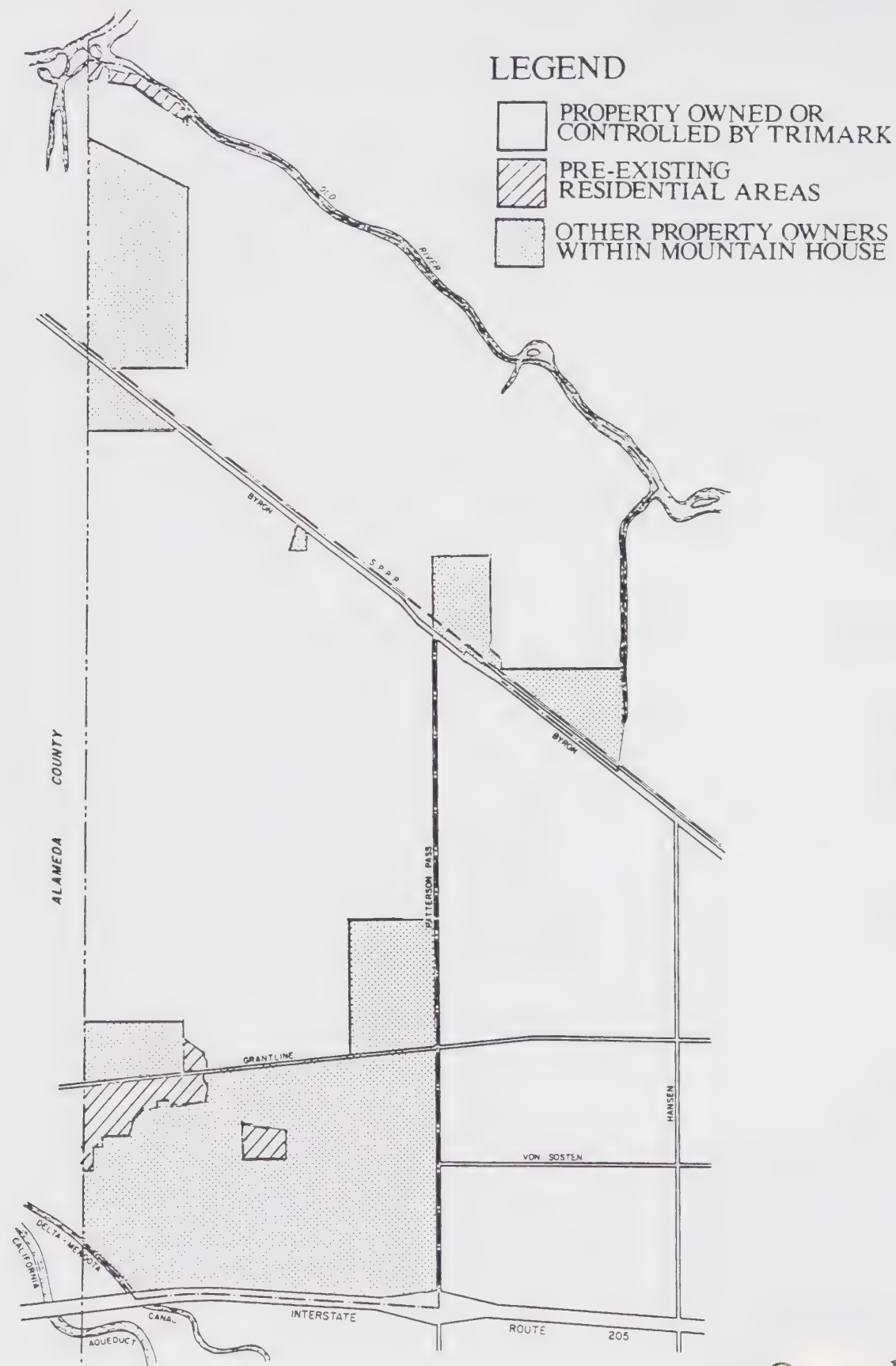
Existing Circulation

Major highway access to the site is available from Interstate 580 and Interstate 205. Immediately southwest of the site, I-580 splits from I-205 to join Interstate 5 to the south. I-580 leads to the East Bay area over Altamont Pass located west of the site.

Local road access is available via Grant Line Road, Patterson Pass Road, and Byron Road, all of which connect to I-205 and other points. Byron Road passes through the site, connecting the City of Tracy with Brentwood, located northwest of Mountain House in Contra Costa County (see Figure 1.7: Pre-Development (1993) Circulation). Kelso Road, Van Sosteen Road, Bethany Road and Wicklund Road intersect the three main roads noted above within the site.

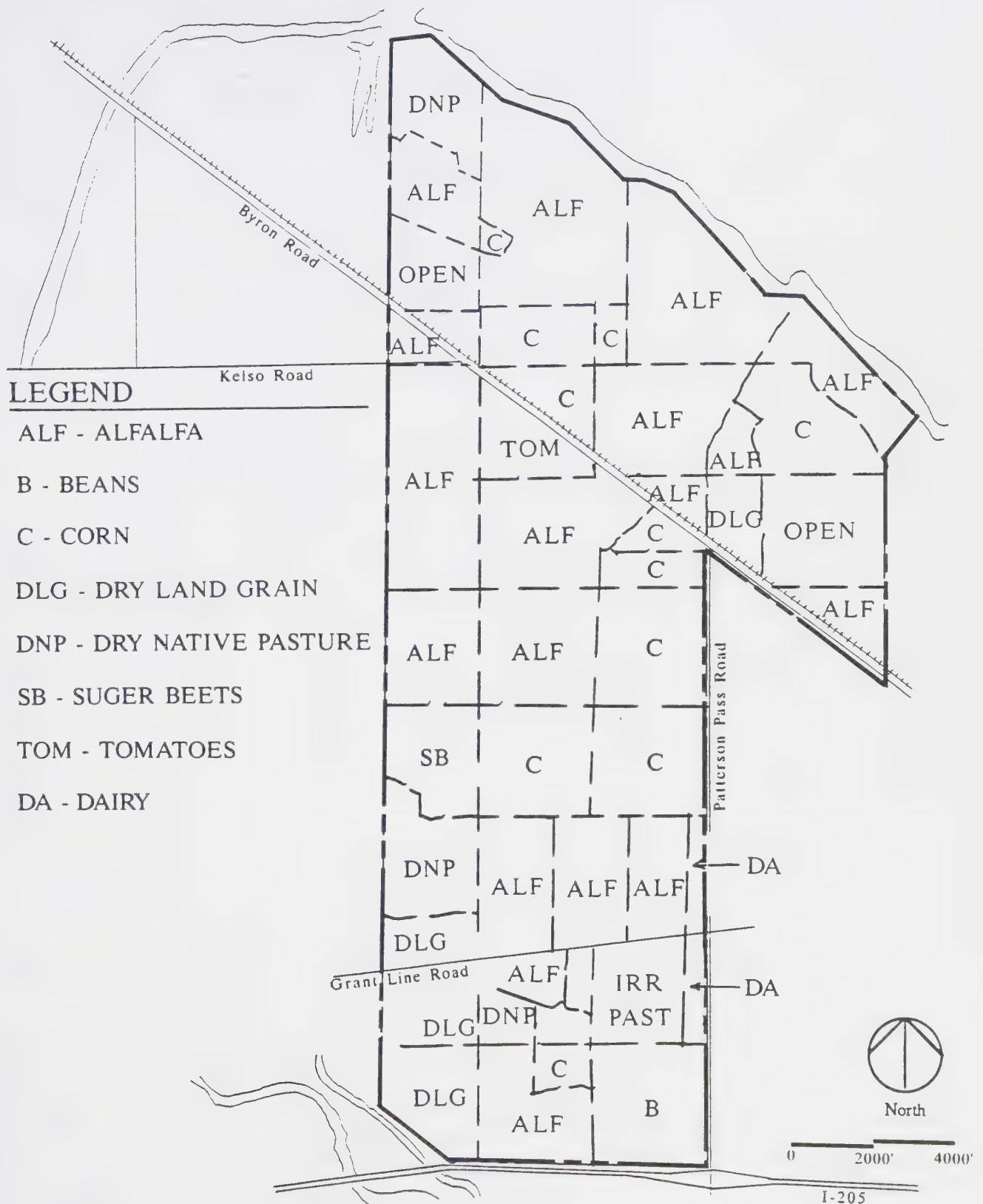
In addition to roadways, a Southern Pacific Railroad line, referred to as the Mococo Line, traverses the northern portion of the Mountain House site, adjacent to the north side of Byron Road. The railroad is currently in limited use and is believed to be usable for future transit service.

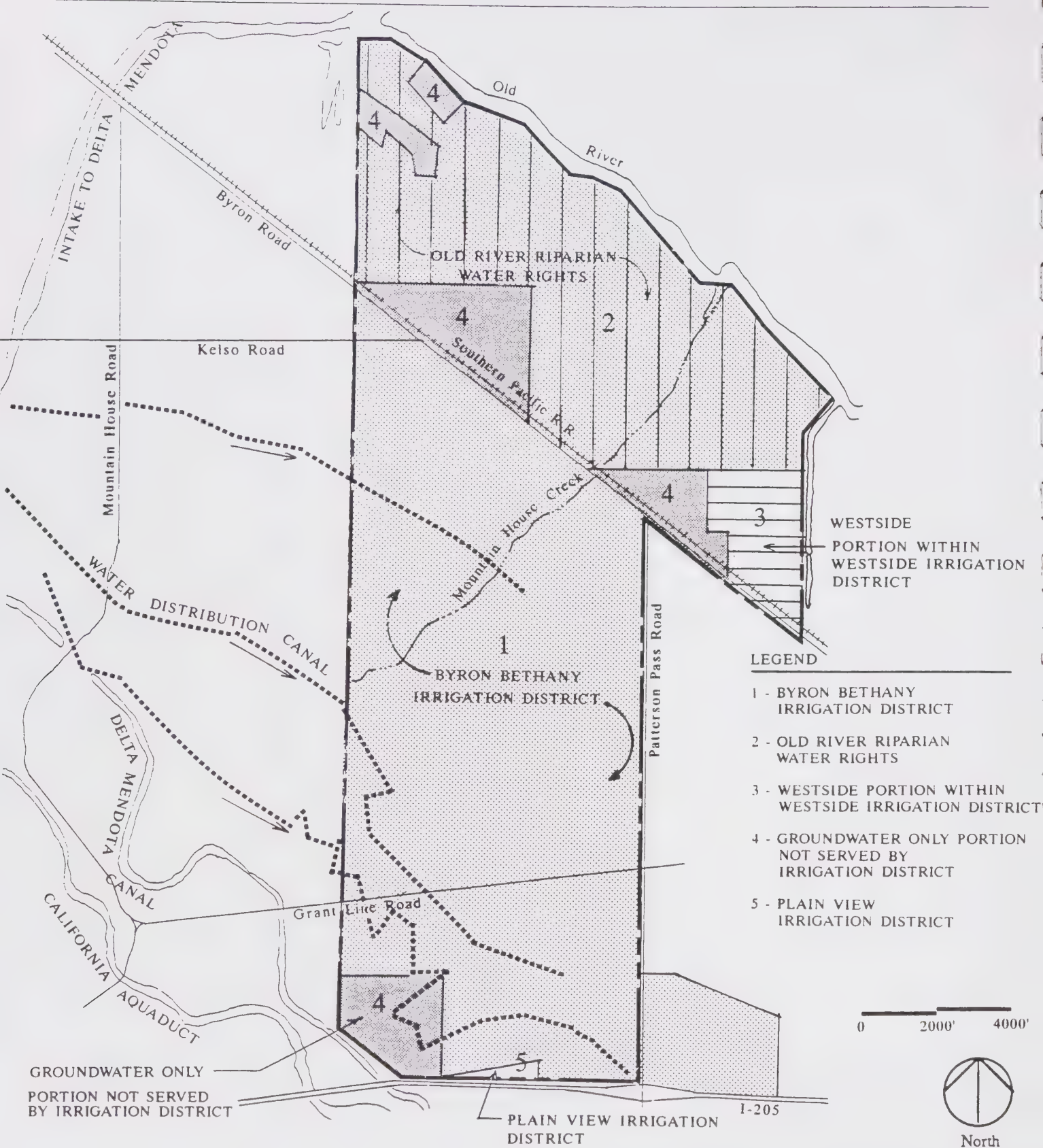




Source: SWA Group

Ownership Map





Pre-Development Agricultural Water Supply

Source: EIR/Baseline

September 16, 1994

Chapter One: Master Plan Introduction



Legend

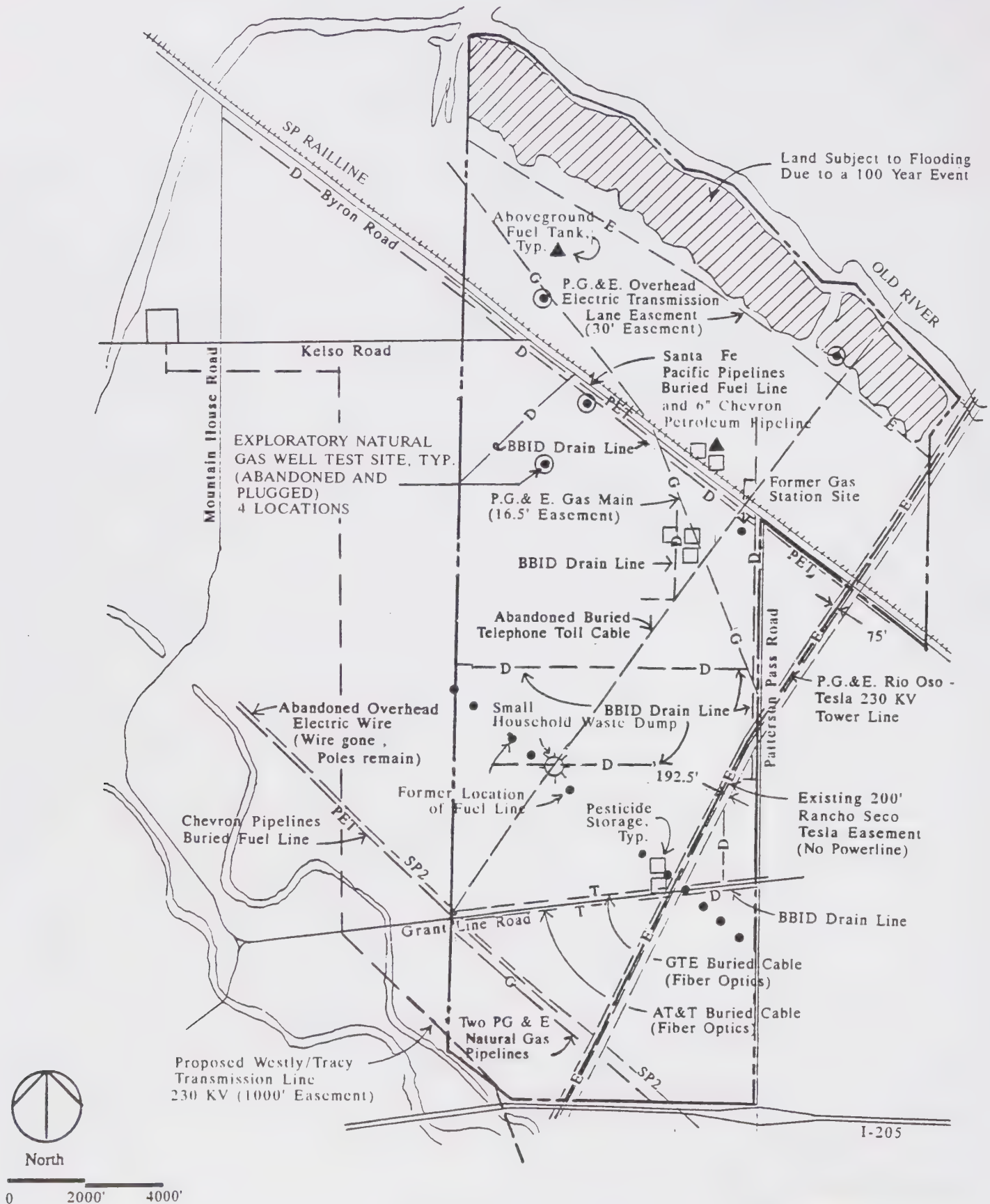
- Freeway Interchange Location
- ++++ Railroad Tracks
- Master Plan Boundary

Pre-Development (1993) Circulation

Source: EIR/Baseline

September 16, 1994

Chapter One: Master Plan Introduction



Source: Siegfried Engineering Inc.

Pre-Development (1993) Site Constraints

September 16, 1994

Chapter One: Master Plan Introduction

Existing Utilities

Electrical utilities and pipelines in the Master Plan area include PG&E's Rio Oso-Tesla Line, a 230 kV tower line which crosses the project site in a 75-foot wide easement from southwest to northeast (see Figure 1.8: Pre-Development Site Constraints).) Parallel and adjacent to this is another PG&E right-of-way that is 192.5 feet in width for a total width of 267.5 feet. This right-of-way was originally intended to accommodate the Rancho-Seco Tesla Tower Line Facility. The Rancho Seco power plant has been permanently closed but PG&E has indicated that they wish to retain the right-of-way.

A 60 kV above-ground electrical facility crosses the site midway between Old River and Byron Road traversing the site from the southeast to the northwest.

An 8-inch diameter high pressure gas main traverses the project site from north to south. A 50-foot wide easement crosses the southwest portion of the site. The easement accommodates two natural gas pipelines owned by PG&E and an oil transmission pipeline owned by Chevron USA Inc. In addition a new 20-foot wide easement for a second PG&E gas pipeline will be immediately adjacent to the east side of the existing 30-foot wide easement.

Other major utilities include communication facilities owned by GTE, AT&T, Pacific Bell, and Continental Telephone Company within the rights-of-way of Grant Line Road and Byron Highway. Several fuel and oil transmission pipelines occur within the right-of-way of Byron Road and the Southern Pacific Railroad tracks. These include an oil transmission pipeline owned by Southern Pacific Pipelines, Inc. and a fuel pipeline owned by Chevron USA, Inc.

1.3.4 Williamson Act Contracts

As of 1993, a total of 3,243.07 acres within the Mountain House site were under Williamson Act Contract. Notices of Non-renewal have been filed for 2,919.5 acres, representing 17 parcels. On February 25, 1993, following approval and adoption of the General Plan Amendment, the Board of Supervisors approved the cancellation of Williamson Act Contracts for 418 acres to serve, together with adjacent land not under contract, as the first phase of development within Mountain House.

Table 1.1 summarizes the status of all parcels within the community currently under Williamson Act, including Assessor's Parcel Numbers (APN), non-renewal expiration dates and cancellations filed (see Figure 1.9: Williamson Act Status).

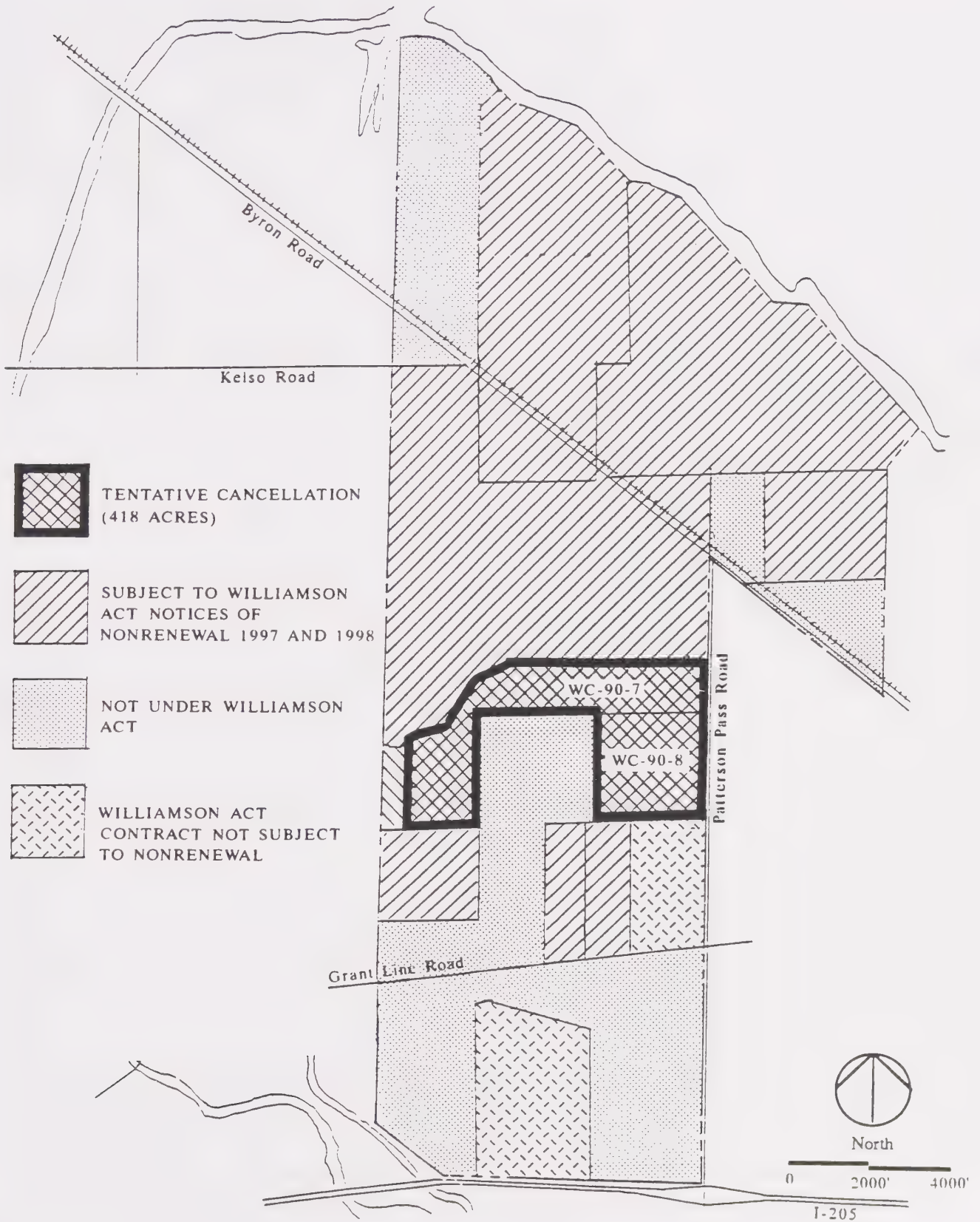
Several parcels of land in the southern section of the community currently under Williamson Act Contract, have not filed for non-renewal. Under provisions of the Act, these properties could not be developed for at least nine years after filing for non-renewal, unless they are approved for cancellation by the Board of Supervisors.

**Table 1.1:
Williamson Act Summary**

APPROVED CANCELLATION AREA		
APN	Acres	Expiration Date
209-050-02 (partial)	176.4	(1)
209-050-06 (partial)	6.3	(1)
209-050-07 (partial)	84.8	(1)
209-050-03 (partial)	150.5	(1)
Sub-Total	418.0	(1)
AREAS FILED FOR NON-RENEWAL		
APN	Acres	Expiration Date
209-030-04	—	December 31, 1997
209-170-02	689.1	December 31, 1997
209-030-03	333.8	December 31, 1998
209-030-05	79.5	December 31, 1998
209-040-02	60.3	December 31, 1998
209-040-03	84.6	December 31, 1997
209-040-06	254.7	December 31, 1997
209-040-09	31.0	December 31, 1997
209-040-10	281.2	December 31, 1997
209-050-02 (partial)	148.6	December 31, 1997
209-050-06 (partial)	122.0	December 31, 1997
209-050-07 (partial)	45.3	December 31, 1997
209-050-03 (partial)	6.3	December 31, 1997
209-060-04	60.5	December 31, 1998
209-060-03	55.5	December 31, 1998
209-160-02	155.3	December 31, 1998
209-060-27	105.3	December 31, 1998
Sub-Total	2513.0	
Total	2,931.00	

4/28/93

- (1) Although these parcels have been approved for tentative cancellation, until these cancellations have been perfected, the expiration date of the contracts is December 31, 1997.



1.4 ENVIRONMENTAL SETTING

1.4.1 Site History

Historic activities in the vicinity of the site include diversified irrigation-based agriculture and the construction of oil and gas pipelines and electrical transmission lines. These activities have altered the landscape in the form of private houses, barns, irrigation canals, pipelines, pumping stations, and electrical towers. During most of the early and mid-1900's the site itself was either low rolling hills or delta flood plain. Construction of the Old River levee allowed about 500 acres of the northern site area to be converted to agricultural production.

Archaeological studies of the area located several zones of potential archaeological sensitivity. In several cases, the integrity and historical associations of the sites are poor; however, there is a possibility that additional subsurface features or artifact concentrations may be encountered by construction in these areas. None of the archaeological sites or historic structures identified within the project area are on or are probably eligible for the National Register of Historic Places. Additionally, none are listed on the California Inventory of Historic Resources.

1.4.2 Visual Character

Mountain House is located at a visual gateway to San Joaquin County along I-205 and the county's western border near the foothills of the Diablo range. Predominant views are across open agricultural fields and grazing lands, occasionally interrupted by built features such as fences, overhead electrical transmission lines and towers and residences. The windmill-covered hills are visible two miles to the west.

The existing landform consists of gently sloping terrain ranging from a maximum elevation of approximately 160 feet in the southwest corner of the site dropping to approximately sea level along the northern project boundary. Topographic features are limited to areas along Mountain House Creek, and the levee bordering Old River.

1.4.3 Vegetation and Wildlife

The Master Plan area supports a variety of plant and animal species, with greatest diversity found in habitats located along Old River.

Vegetative Resources

Figure 7.9: Tree Locations & Wetlands in Chapter Seven identifies trees and indicates the locations and general conditions of trees throughout the site, as observed in mid-December 1992. As indicated, trees are generally confined to isolated portions of the Mountain House Creek corridor; windrows along existing roadways, agricultural fields or farmsteads; and the riparian edge of Old River.

Swainson's Hawk

As described in the EIRs prepared on the Mountain House General Plan Amendment, the Swainson's hawk has been observed at the site. These hawks are state-listed as a threatened species. They feed on burrowing rodents that thrive in alfalfa fields. ~~While no nests were found, the northeastern portion of the Mountain House site appears to be a foraging area for this hawk.~~ During the 1994 season, two active nests were found within the new community boundaries. The agricultural portions of the site function as foraging area, as well, for this hawk.

Kit Fox

Mountain House is situated adjacent to the northern edge of the County's study area for the San Joaquin Kit Fox Habitat Conservation Plan. Spring and summer kit fox surveys, conducted in 1992 as part of the most recent field work for the SEIR, were performed on-site from April 27 to June 3 and from August 3 to September 3, respectively. The surveys included den and sign surveys, night spotlighting, scent stations, camera stations, and incidental wildlife observations, and no direct evidence of kit fox occurrence on the site was found. ~~The surveys identified no den sites within the project boundaries.~~ Although limited populations of ground squirrels and hares (kit fox prey in the northern portion of its range) can be found on the site, the site does not provide current den sites for the kit fox.

1.4.4 Wetlands

There are five types of waters/wetlands existing within the project area: seasonal wetland, emergent marsh, alkali meadow, excavated stream channels, and perennial river. The Corps of Engineers has verified the wetland delineation with revisions and clarifications by letter dated October 1, 1992 (see Figure 7.9: in Chapter Seven).

Emergent marsh is found in two locations: one on Mountain House Creek approximately 2,000 feet upstream of Byron Road and the other in the northwest portion of the project area along Dry Creek. Seasonal wetlands are located along Mountain House Creek near the western project boundary. One alkali meadow was delineated in the northeast portion of the project area adjacent to the river levee. This wetland is enclosed by two ditch berms as well as the river levee.

Mountain House Creek and Dry Creek are small stream courses which have been channelized in the past and are periodically maintained by farmers to ensure irrigation runoff. As a result, they may be incised as much as ten feet, are largely devoid of established vegetation and are not considered to be wetlands except in two pond areas used for agricultural water supply. Old River is bordered by a large flood control levee. A narrow band of riparian wetland is supported along the waterward side of the levee to an elevation several feet above the ordinary high water line.

There are several large expanses of pasture which have been subject to flood irrigation for many years. While plants in these areas are considered to be wetland species, such areas are not considered to be wetlands.

1.4.5 Hydrology and Drainage

The Mountain House site is located on a gentle, northeastward sloping alluvial surface at the base of the eastern flank of the Altamont Hills. Several existing watersheds to the west and south of the project site impact the project storm drainage collection and disposal system.

Mountain House Creek is one of two northeastward flowing streams that traverse the site. The creek drains an area of about 15 square miles, and is seasonal or intermittent in its natural condition but has very low flows year-round due to possible leakage from the Delta Mendota Canal and California Aqueduct or springs within the watershed. Dry Creek is a smaller stream parallel to and northwest of Mountain House Creek. It drains an area of about 6.8 square miles. Both channels have been modified by agricultural practices downstream of the Delta Mendota Canal.

A network of numerous small ditches provides drainage of the interior of the Mountain House area. The majority of runoff is directed by drainage ditches to farm drains along Patterson Pass Road and Byron Road. North of Byron Road, the farm fields are drained by ditches that direct runoff northward toward Old River, where it collects in ditches along the levee and is pumped into the river by pump stations.

1.4.6 Flood Zones

The northern portion of the site is identified by the Federal Emergency Management Agency (FEMA) as being within the 100-year floodplain of Old River. The flood zone forms a band about 1,500 to 2,000 feet wide along the base of the levee at the north edge of the site. The existing stream channels of Mountain House Creek and Dry Creek are not able to contain storm flows during intense precipitation periods.

1.4.7 Geology and Soils

Topography

The project site is located on a gentle northeast-sloping surface which has been dissected by small northeast flowing streams, including Mountain House Creek. The average slope at the site is less than one percent. No slopes are greater than three percent with the exception of the side slopes of the levees along Old River.

Site topography has been significantly modified by agricultural operations to optimize irrigation and control erosion. A borrow pit was excavated at the southwest corner of the project site. Levees for flood protection have been constructed along Old River and the dredger cut along Wicklund Road at the site's eastern boundary, as well as along the Delta-Mendota Canal.

Geology

Subsurface investigations at the site indicate that the majority of the near-surface sediments consists of silt and clay. Groundwater was encountered at depths from five to 16 feet below the ground surface at most of locations. Sandy silt and sand deposits at depths below the groundwater table were reported from data collected from borings made in the northern portion of the site, but subsequent investigations did not corroborate these results. If liquefaction of fine-grain deposits were to occur, it would be localized in nature and would not occur on a regional level.

The gentle hillslopes in the southwestern portion of the site do not show evidence of significant landsliding, and the project site is located outside areas of southwest San Joaquin County identified as susceptible to landsliding. No evidence of landslides or mudslides has been mapped within or immediately adjacent to the project site.

No active faults have been identified at the project site. ~~A description of seismicity is provided in Appendix 1 C: Seismicity Information.~~

Soils

Eight distinctive soil types have been mapped by the US. Soil Conservation Service (SCS) at the site. ~~Soils are described in more detail in Appendix 1 D: Soil Classifications.~~ Seven of these soil types are predominantly silty clay and clays developed on the gently sloping alluvial fan sediments. Seasonal wetting and drying of these soils causes expansion and contraction of clay particles within the soil. The erosion potential of these soils is low. The eighth soil type contains a comparatively higher content of sand particles and is found along the channels of Mountain House Creek and Dry Creek. The erosion potential is low when the topography is gentle.

Although wetlands have been identified within the project site, none of the mapped soil units in the project site are classified as hydric soils. Hydric soils, if present at the site, may be localized in extent and would not be identified by SCS mapping techniques.

1.4.8 Public Health and Safety

Potential sources of public health and environmental hazards at the Mountain House site include fuel tank usage, historic and recent pesticide usage, potential salt accumulation from agriculture, discarded drilling mud from the abandoned natural gas wells, spills and leakage from existing and abandoned fuel pipelines, possible presence of polychlorinated biphenyl's (PCBs) in power transformers, and electromagnetic fields generated by electrical overhead transmission lines.

Figure 1.8: Pre-Development (1993) Site Constraints identifies the location of potential hazards at Mountain House.

CHAPTER TWO



COMMUNITY VISION

CHAPTER TWO: COMMUNITY VISION

2.1 COMMUNITY CONCEPT

Mountain House is envisioned as a new self-sufficient community offering employment, goods, services, and recreation to a population of 44,000 people. Land use and circulation are designed to encourage walking, bicycling, and transit use through a highly landscaped, visually attractive community.

Residential development in Mountain House is contained in 12 neighborhoods, each containing a small shopping area, a neighborhood park, and a K-8 school. The neighborhoods will each have a separate identity, achieved through design and landscaping. A variety of types and prices of housing will be available.

Major weekly shopping and other services will be met by the Village Centers. A centrally located Town Center will be the civic and commercial focal point of the community. Employment centers will include office and industrial parks. Natural resources on the site will be enhanced to be an asset to urban development.

The goals and objectives in this chapter further identify the concept of Mountain House. Other chapters plan each element of the community and contain policies to guide the community's development.

The following assumptions provide the basic framework used in the formation of the community-wide Master Plan.

- a) Mountain House will have an ultimate population of approximately 44,000 people. It will include approximately 16,000 dwelling units which will be encompassed in separate neighborhoods organized around Neighborhood Centers.
- b) Approximately 21,000 jobs will be provided in Mountain House at full buildout of the community.
- c) Mountain House will develop in a manner consistent with this plan over a 20 to-40 year period.

2.2 OVERALL GOALS

Goal:

Create a high quality environment where people of all economic levels can live and work.

Goal:

Develop a distinct and unique new community that is separate from existing communities.

Goal:

Develop Mountain House as a full service community that will accommodate a portion of the growth projected by the County's General Plan 2010 in an orderly, well-organized development pattern.

Goal:

Provide for a lifestyle that is less reliant on the automobile, more involved with activities within the local community and neighborhoods, and more oriented to use of transit, bicycle and pedestrian transport.

2.3 COMMUNITY CHARACTER GOALS AND OBJECTIVES

Goal:

Create attractive and diverse environments for living, working and playing.

Objective: To develop 12 identifiable, pedestrian-oriented residential neighborhoods, each organized around Neighborhood Centers consisting of K-8 schools, parks, neighborhood commercial, and other neighborhood serving facilities.

Objective: To develop three Village Centers that will provide shopping centers, transit, and other services with easy access from the 12 residential neighborhoods.

Objective: To develop the mixed use Town Center as an urban center for community activities that will support high density retail, civic, and office and residential development.

Objective: To use roadway landscaping as a primary method of establishing community character and of distinguishing between neighborhoods.

Objective: To establish neighborhood and community parks, and support regional recreation for Mountain House residents.

Objective: To contribute to regional recreation needs by creating one or more golf course(s) and providing public access to the Delta waterways through a linear park and marina on Old River.

Goal:

Provide for a pedestrian-oriented character within and between residential neighborhoods, village commercial centers, and the Town Center.

- Objective: To locate a Neighborhood Center within 2,000 feet of every residential unit in each of the 12 neighborhoods.
- Objective: To locate neighborhood parks of approximately five acres adjacent to schools for joint use of park and school facilities.
- Objective: To utilize an interconnected network of relatively small-scale streets within neighborhoods in order to create a pleasant and safe street environment for pedestrian use.
- Objective: To orient important public buildings and land uses, including neighborhood commercial and appropriate buildings or building facades within Village Centers, toward the street.
- Objective: To connect the Town Center to the linear park and bikeway systems and provide pedestrian amenities within the Town Center.
- Objective: To design neighborhoods, village commercial centers and the Town Center to facilitate transit and bicycle use.

2.4 LAND USE GOALS AND OBJECTIVES

Goal:

Establish a balance of housing, employment, and a full range of services and infrastructure within the community, while encouraging interaction between land uses.

- Objective: To develop a new community with its own balanced mix of housing, public services, employment opportunities, parks, schools, and shopping facilities to serve the projected residential population.
- Objective: To create neighborhoods that provide for the daily commercial, educational, and recreational needs of the residents within walking distance.
- Objective: To provide light industrial and commercial office use areas suitable for the development of high quality business parks, allowing potential employers to relocate and expand in a strategic regional location with adequate transportation, services, moderate land costs, few site constraints and housing affordable to the jobs provided.
- Objective: To allow for a diversity of residential areas and a hierarchy of commercial areas.
- Objective: To provide sufficient employment areas to create a job for every resident of the community who is projected to be working.

Goal:

Minimize impact on the County's agricultural resources.

- Objective: To minimize impacts on County agricultural lands by developing the community in an orderly and efficient manner, at average residential densities of at least 6.5 units per acre.

- Objective: To establish strong community boundaries and reduce potential conflicts with adjacent agricultural lands by creating buffers along the western and eastern community boundaries.

2.5 HOUSING GOALS AND OBJECTIVES

Goal:

Provide an adequate supply of housing for all income groups in the community.

- Objective: To establish neighborhoods with varying levels of amenities and a mixture of housing densities, ranging from golf course-related residential developments to entry-level neighborhoods.
- Objective: To designate an average density of between six and seven units per acre overall in order to achieve a higher density than is currently found in the County, thereby meeting market needs and achieving more affordability and entry-level housing opportunities.
- Objective: To establish a balance of jobs and housing by matching projected income levels of jobs provided within the community with the projected cost of housing.
- Objective: To ensure housing for a variety of income levels within each neighborhood.
- Objective: To provide multi-family housing within the community, to be concentrated adjacent to the Mountain House Creek corridor and Village Centers and in and adjacent to the Town Center.

2.6 ECONOMIC DEVELOPMENT GOALS AND OBJECTIVES

Goal:

Create a financially and fiscally viable community resulting in positive economic impact on the County.

- Objective: To insure fiscal protection of the County and future community residents by creating an independent and self-sustaining community.
- Objective: To provide for efficient phasing in order to avoid potential fiscal impacts.
- Objective: To plan for the location of new, expanding or relocating businesses serving the Central Valley and the Bay Area by designating areas for industrial and office commercial use.
- Objective: To attract businesses to provide an economic base, provide jobs and serve residents.
- Objective: To provide employment areas with arterial roadway access, transit service, nearby housing, and state-of-the-art telecommunication services.
- Objective: To provide for efficient, cost effective community operations.

2.7 CIRCULATION GOALS AND OBJECTIVES

Goal:

Establish a safe and efficient circulation system to accommodate the movement of people and goods, reduce environmental impacts, and advance the quality of life in the community.

- Objective: To minimize impacts on regional roadways and air quality by providing a community design that emphasizes trip length reductions, reduced off-site trips, pedestrian and bicycle travel, and access to regional transit facilities.
- Objective: To provide a complete multi-modal transportation system, including on and off-site roadways, transit, bicycle and pedestrian facilities.
- Objective: To minimize high-speed traffic through neighborhoods by establishing a network of arterial streets which are located between neighborhoods and effectively link residential, employment and commercial uses.
- Objective: To locate collector and local streets to allow low-speed, alternative routes through neighborhoods while linking school and other public destinations within the different neighborhoods.
- Objective: To provide major road access to trip generating uses such as commercial, employment, and recreational areas.

2.8 PUBLIC SERVICES GOALS AND OBJECTIVES

Goal:

Provide adequate public services and facilities to serve the new community.

- Objective: To provide on-site water treatment and sewage treatment systems at quality standards which meet or exceed standards of regulatory agencies, and to re-use treated wastewater either on-site or off-site for the most economical and beneficial use.
- Objective: To follow a pattern of contiguous residential growth that will provide each stage of development with adequate services and infrastructure, and to plan and construct infrastructure to avoid creation of excess capacity.
- Objective: To size public services and facilities to maintain the community's boundaries by serving only the Master Plan area.
- Objective: To minimize administrative impacts on the County by forming a self-sufficient Community Services District to provide on-site water, sewer, storm drainage, roads, parks and other necessary services.

2.9 RESOURCE CONSERVATION GOALS AND OBJECTIVES

Goal:

Minimize impact on sensitive environmental resources.

- Objective: To preserve and enhance wetlands and riparian areas within the project, including wetlands along Mountain House Creek and Dry Creek.
- Objective: To incorporate effective and feasible energy and water conservation techniques and procedures into the development.
- Objective: To minimize and/or mitigate regional and site impacts to the extent possible by meeting the requirements of the Mitigation Monitoring Program.
- Objective: To protect sensitive environmental and visual resources at the community's edges by establishing effective buffers along the northern boundary with Old River, the southern boundary with I-205, and the eastern and western boundaries with agricultural lands.
- Objective: To maintain and enhance the habitat resources of Mountain House Creek as a park and wildlife corridor through the community.
- Objective: To minimize air quality impacts by providing for more efficient transportation systems and neighborhood design and services.

CHAPTER THREE



LAND USE

CHAPTER THREE: LAND USE

3.1	INTRODUCTION	1
3.1.1	Purpose	1
3.1.2	Overall Concepts	1
3.1.3	Neighborhood Structure and Village Centers	5
3.1.4	Community Identity and Design Expression	5
3.2	COMMUNITY LAND USE PLAN	7
3.2.1	Purpose of the Land Use Plan	7
3.2.2	Land Use Program	7
3.2.3	Accuracy in Relationship to Specific Plans	7
3.2.4	Pre-Existing Land Uses Within Mountain House	17
3.2.5	Description of Planned Land Uses	20
3.3	LAND USE REGULATIONS AND PERMITTED USES	25
3.3.1	Residential Densities and Unit Totals	25
3.3.2	Permitted Uses	29
3.3.3	Home Occupations	29
3.3.4	Second Units	30
3.3.5	Senior Housing	30
3.4	RESIDENTIAL OBJECTIVES AND POLICIES	31
3.4.1	Neighborhood Structure	31
3.4.2	Residential Site Planning and Design	32
3.5	TOWN CENTER OBJECTIVES AND POLICIES	36
3.6	COMMERCIAL OBJECTIVES AND POLICIES	39
3.6.1	General Issues	39
3.6.2	Neighborhood Commercial	40
3.6.3	Community Commercial	42
3.6.4	General Commercial	43
3.6.5	Freeway Service Commercial	44
3.7	INDUSTRIAL AND OFFICE USE POLICIES	46
3.8	PUBLIC AND INSTITUTIONAL USE POLICIES	48
3.9	JOBS/HOUSING & AFFORDABLE HOUSING	49
3.9.1	Definitions and Assumptions	49
3.9.2	Jobs/Housing Program	52
3.9.3	Affordable Housing Program	62
3.9.4	Monitoring and Enforcement	70
3.10	SPECIFIC PLAN REQUIREMENTS	72

List of Figures

Figure 3.1: Community Concept Diagram	2
Figure 3.2: Residential Neighborhood Boundaries Diagram	3
Figure 3.3: Community Subareas Map	4
Figure 3.4: Neighborhood Structure	6
Figure 3.5A: Land Use & Circulation Plan	8
Figure 3.5: Land Use & Circulation Plan	9
Figure 3.6: Land Use & Circulation Plan - North Area	10
Figure 3.7: Land Use & Circulation Plan - Central Area	11
Figure 3.8: Land Use & Circulation Plan - South Area	12
Figure 3.9: Pre-Existing Residential Areas	18
Figure 3.10: Pre-Existing Residential Areas/Enlargement at Grant Line Road	19
Figure 3.11: Residential Fronting Arterial Streets	34
Figure 3.12: Town Center Concept	37
Figure 3.13: Neighborhood Commercial Concept	41
Figure 3.14: Commercial Freeway Service Concept	45

List of Tables

Table 3.1: Land Use Program	13
Table 3.2: Neighborhood Summary pg. 1	14
Table 3.3: Maximum and Minimum Residential Units by Neighborhood	27
Table 3.4: Implementing Zones for General Plan Land Use Designations	28
Table 3.5: Mountain House Jobs/Housing Analysis	54
Table 3.6: Analysis of Jobs/Housing Balance Over Time	56
Table 3.7: Analysis of Various Jobs/Housing Scenarios Over Time	57
Table 3.8: Impact of Residential and Commercial/Industrial Direct Construction Jobs	61
Table 3.9: Summary of Affordability Analysis	67
Table 3.10: Household Income Categories for Planned Units	68
Table 3.11: Affordability Index Goals Over Time	69

CHAPTER THREE: LAND USE

3.1 INTRODUCTION

3.1.1 Purpose

This chapter describes the land use plan and the primary design concepts for Mountain House. The chapter provides policies which are intended to implement the goals and objectives described in Chapter Two: Community Vision.

This chapter also presents land use assumptions, states land use regulations and development standards, and defines the jobs-housing and affordable programs.

The assumptions, regulations and standards described in this Plan may include differences from County policies or regulations in other communities in the County. These provisions are intended to facilitate the use of higher densities, smaller residential lot sizes, innovative housing types and development patterns, more efficient transit, pedestrian and bicycle facilities and roadway systems.

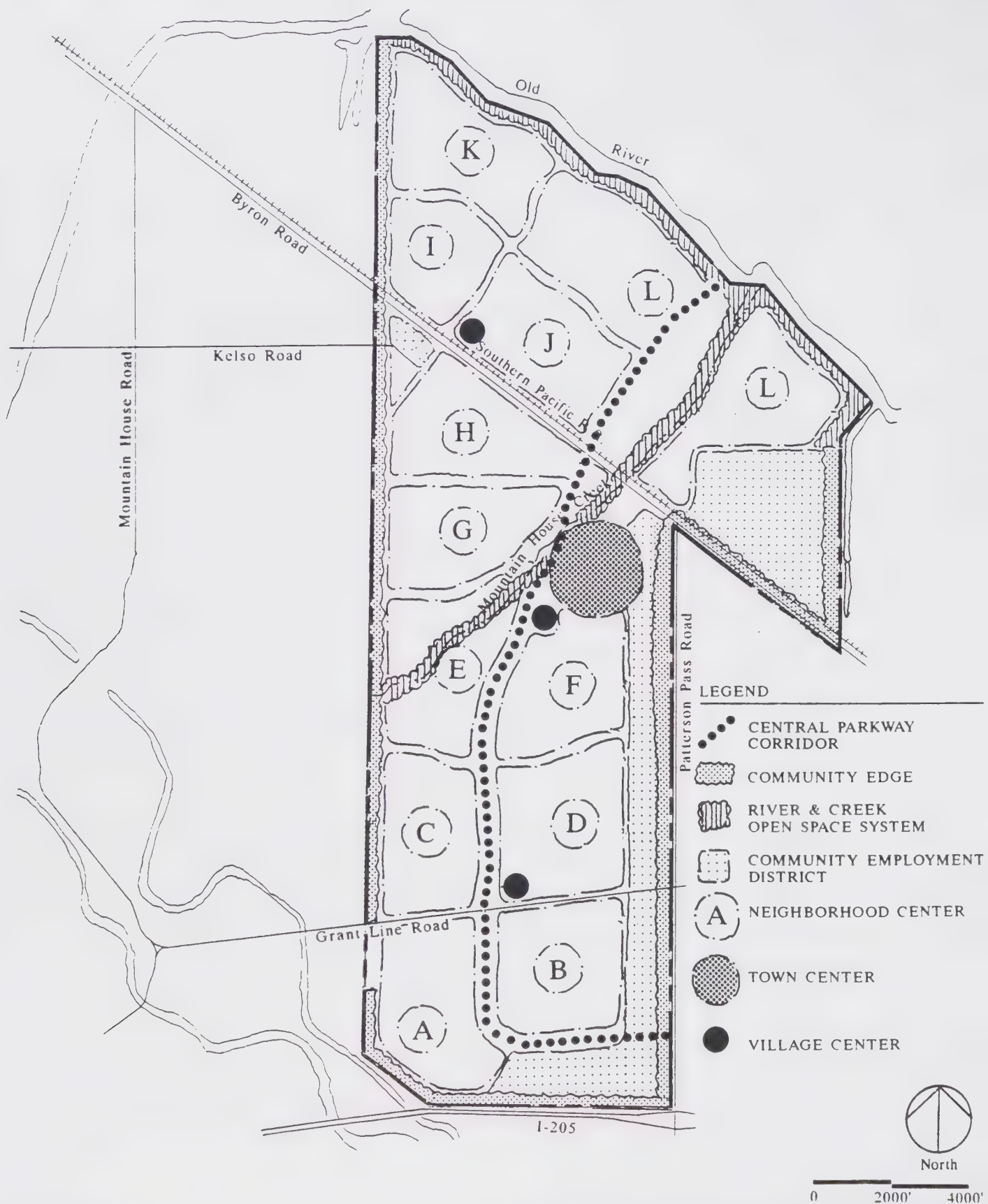
3.1.2 Overall Concepts

Mountain House is planned as a comprehensive new community that provides a balance of housing and employment, a diversity of housing types and employment opportunities and recreational amenities for its residents. In the tradition of California Central Valley towns, Mountain House is planned to develop as a community of pedestrian-scaled, tree-shrouded neighborhoods, each focused on the neighborhood school and park, and linked to nearby shopping. The mixed use Town Center provides a focal point for civic and community activities and for commercial businesses.

An important objective in the design of the community is to create a lifestyle that is less reliant on the automobile, more connected to the activities within local neighborhoods, and more oriented to transit, bicycles and walking.

As illustrated by Figure 3.1: Community Concept Diagram and Figure 3.2: Residential Neighborhood Boundaries Diagram, the land use plan for Mountain House organizes neighborhoods, shopping areas and other facilities to encourage pedestrian use and access and to minimize the need for off-site automobile travel for the majority of residents' needs. The structure of the community incorporates Neighborhood and Village Centers which will serve as locations for transit connections and pedestrian destinations. The roadway layout provides efficient access from residential to employment districts, whether by transit, bicycle, carpool, or short trips by car. The open space system contains linear parks as well as local facilities to enable residents to enjoy recreational opportunities without driving.

Additionally, several subareas providing distinct community functions are identified by Figure 3.3: Community Subareas. These Subareas include the Town Center, Mountain House Business Park, Old River Industrial Park, Patterson Pass Corridor, Village Commercial Centers, and the Central Community Commercial center.

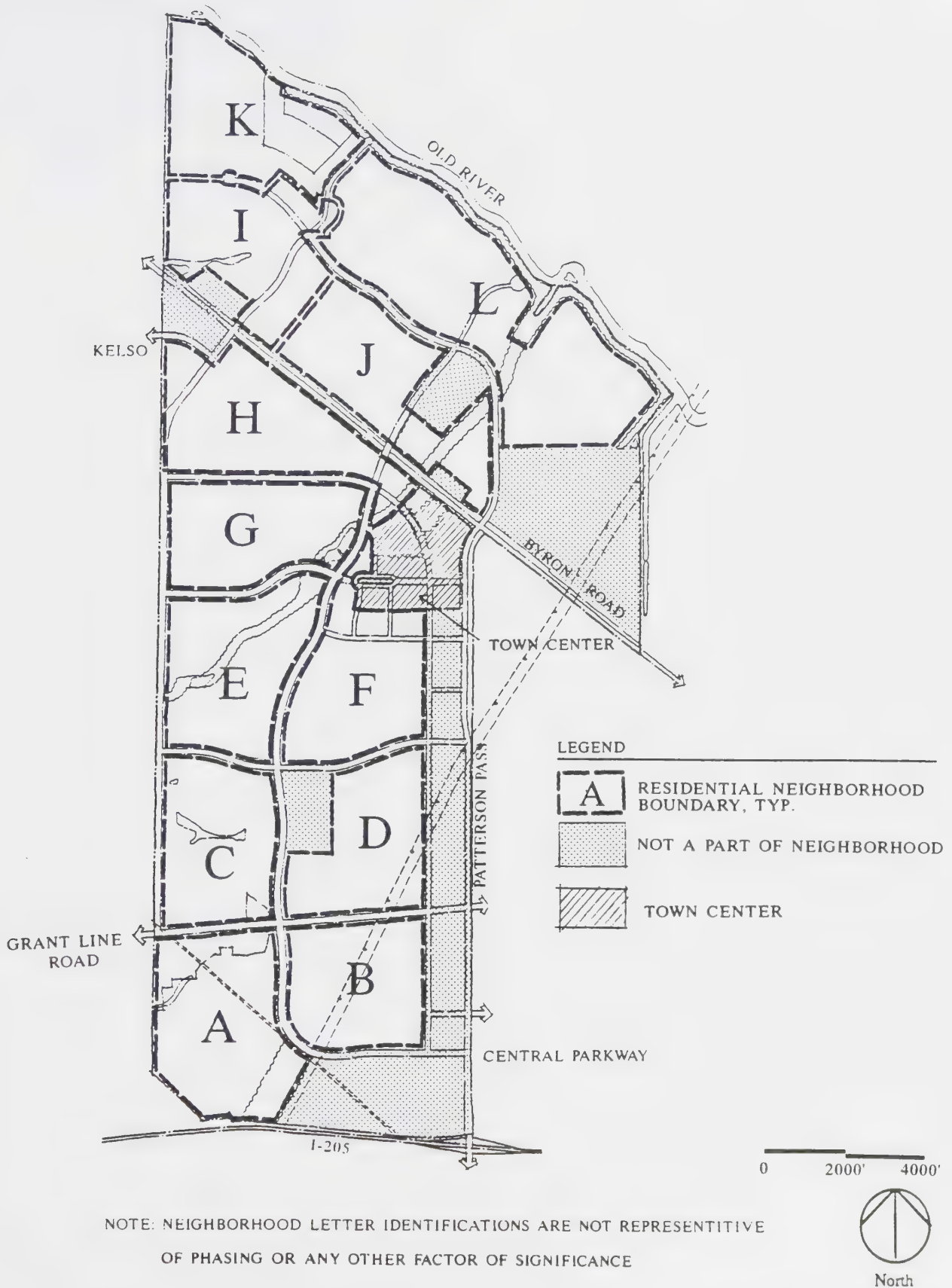


Source: The SWA Group

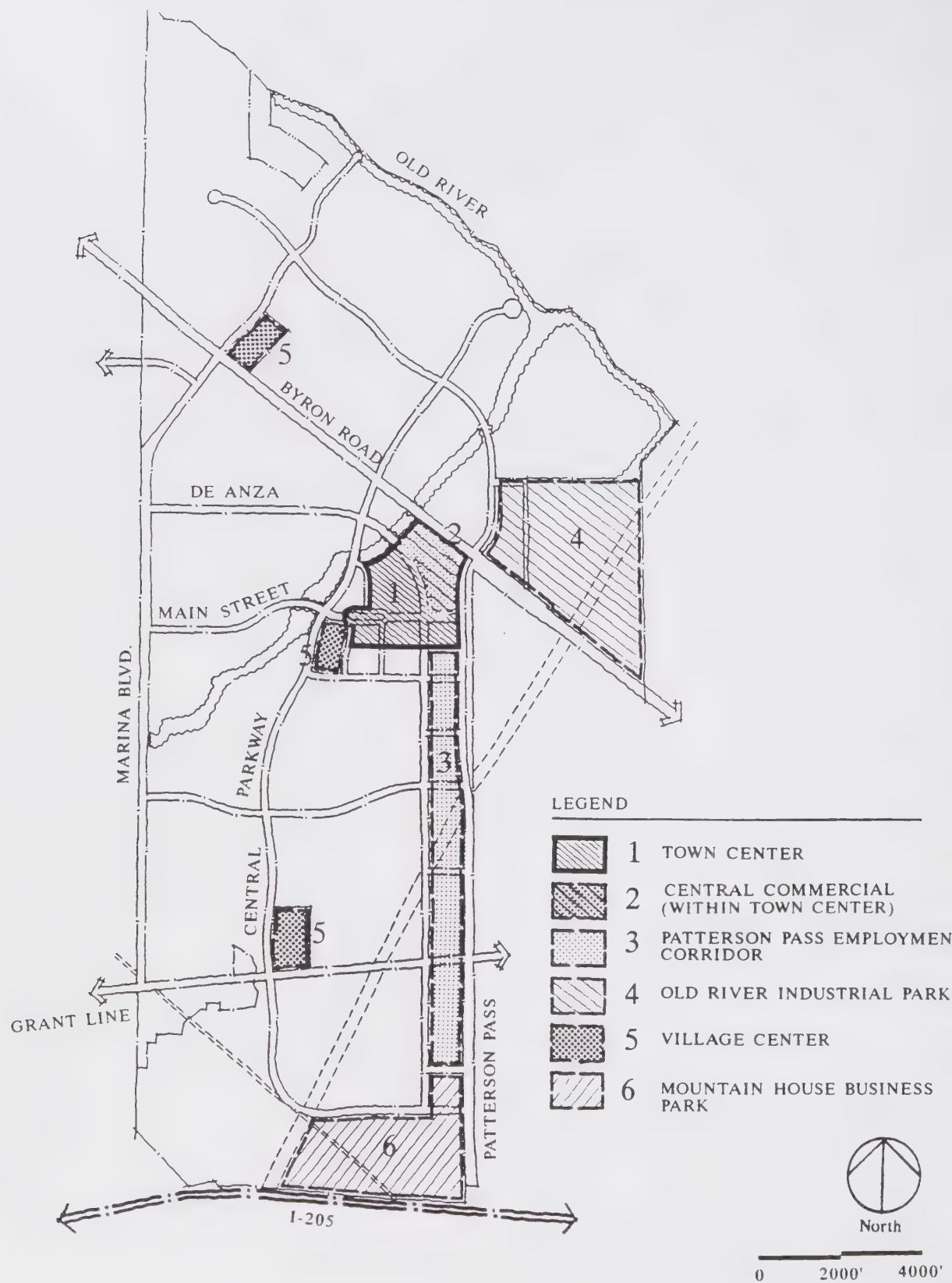
Community Concept Diagram

September 16, 1994

Chapter Three: Land Use



Residential Neighborhood Boundaries Diagram



3.1.3 Neighborhood Structure and Village Centers

Mountain House is organized into 12 distinct neighborhoods of roughly the same size, each with a centrally located K-8 school and neighborhood park serving as the center of neighborhood activities. Neighborhoods will be planned to create a distinct sense of identity and character that offer safe and visually appealing environments, with street landscaping, entries, walls and fences, signage and other elements designed as an integrated system for each neighborhood.

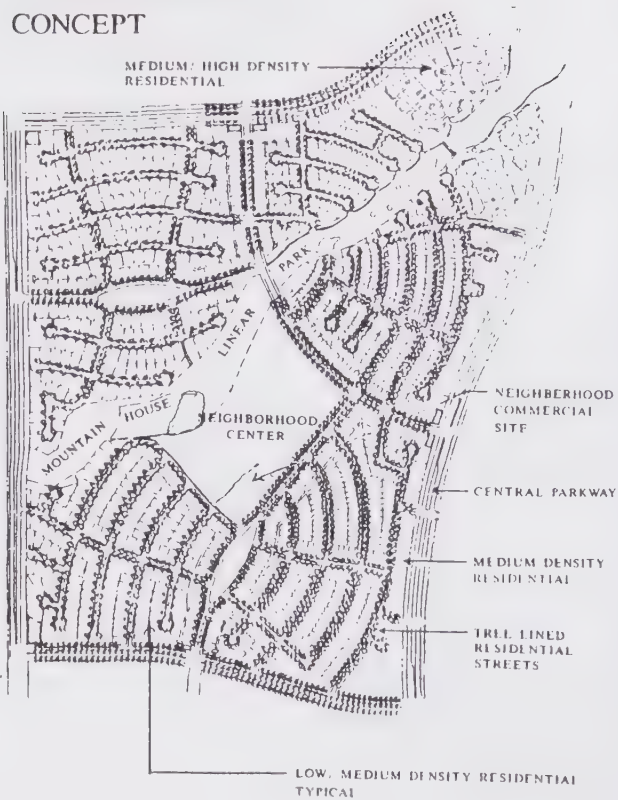
Figure 3.4: Neighborhood Structure illustrates a conceptual layout of a neighborhood within the community. Neighborhoods are sized to provide convenient walking access to the local Neighborhood Center and commercial uses. Each neighborhood is organized around a Neighborhood Center, consisting of a K-8 school, park, neighborhood commercial and other neighborhood serving facilities. Neighborhood boundaries are also intended to delineate the attendance boundaries of each K-8 school.

Three Village Centers are located to provide nearby shopping and service needs for groups of four neighborhoods. The Village Centers will also provide transit connections and facilities.

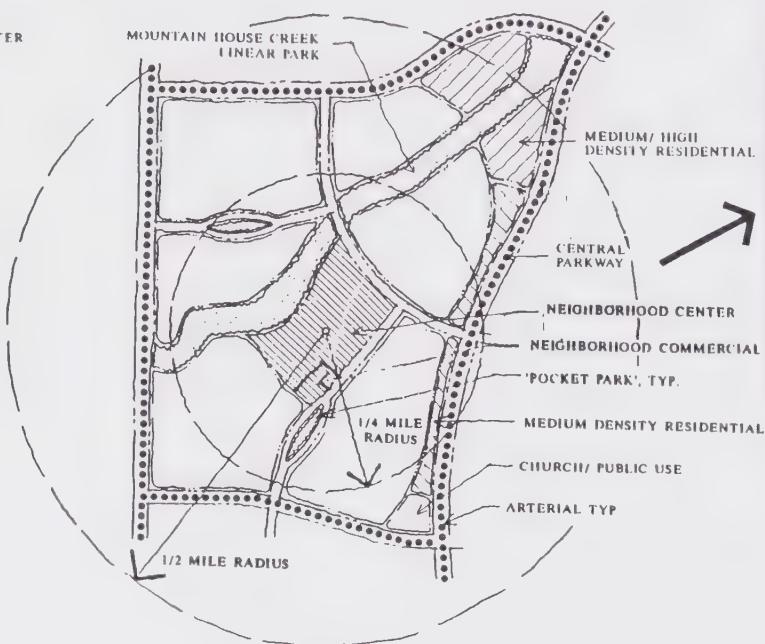
3.1.4 Community Identity and Design Expression

Creating a distinct image and identity is important to the success of the community environment. The image of Mountain House will be partially established through the consistent treatment of community wide elements such as landscaping and site graphics. Additionally, the Master Plan contains ~~standards to ensure~~ provisions regarding ~~of high quality~~ buildings, public art, water elements, site furnishings and other elements which contribute to the overall image of the community. Within this community-wide framework, each neighborhood will benefit from a consistent application of design elements that are unique to that neighborhood. The intent is to provide a sense of continuity but not to produce a regimented, monotonous environment.

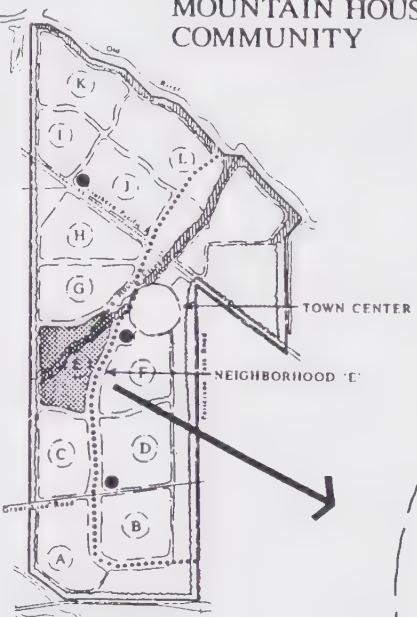
Community-wide elements such as Arterial streets, major entries, and the Mountain House Creek corridor will establish a common identity for the entire community. Landscape treatment will be consistently applied in these areas. In contrast, the Village Centers and neighborhoods will exhibit a different character, with distinct architecture, landscape and furnishings. The intent is to allow for individualized expressions within the overall framework of the community as defined by major public corridors such as streets and parks.

NEIGHBORHOOD 'E'
CONCEPT

NEIGHBORHOOD 'E' STRUCTURE



- SCHOOL/ PARK CENTRALLY LOCATED
- 1/2 MILE MAXIMUM WALKING DISTANCE TO SCHOOL.
- MINIMIZE ARTERIAL (FOUR LANE) CROSSINGS TO SCHOOL SITE

MOUNTAIN HOUSE
COMMUNITY

Source: The SWA Group

September 16, 1994

Chapter Three: Land Use

Neighborhood Structure

3.2 COMMUNITY LAND USE PLAN

3.2.1 Purpose of the Land Use Plan

The purpose of the Land Use Plan is to establish the generalized location and categories of land use for the entire Mountain House community (see Figure 3.5: Land Use & Circulation Plan). It sets the land use framework for subsequent Specific Plans, and defines the boundary limits of the overall community. In addition to establishing the basic allocation of land uses, the Land Use Plan establishes the primary circulation system and intersections of the primary network and future Collector streets. The level of detail shown in the land use plan in Figure 3.5 is comparable to a general plan land use map. For ease of reference, Figures 3.6, 3.7 and 3.8 provide enlarged versions of the Land Use & Circulation Plan for the north, central, and south areas of the community.

The Land Use Plan is intended to allow flexibility for subsequent Specific Plans and subdivision applications to define the specific mix, configuration and character of uses in greater detail.

3.2.2 Land Use Program

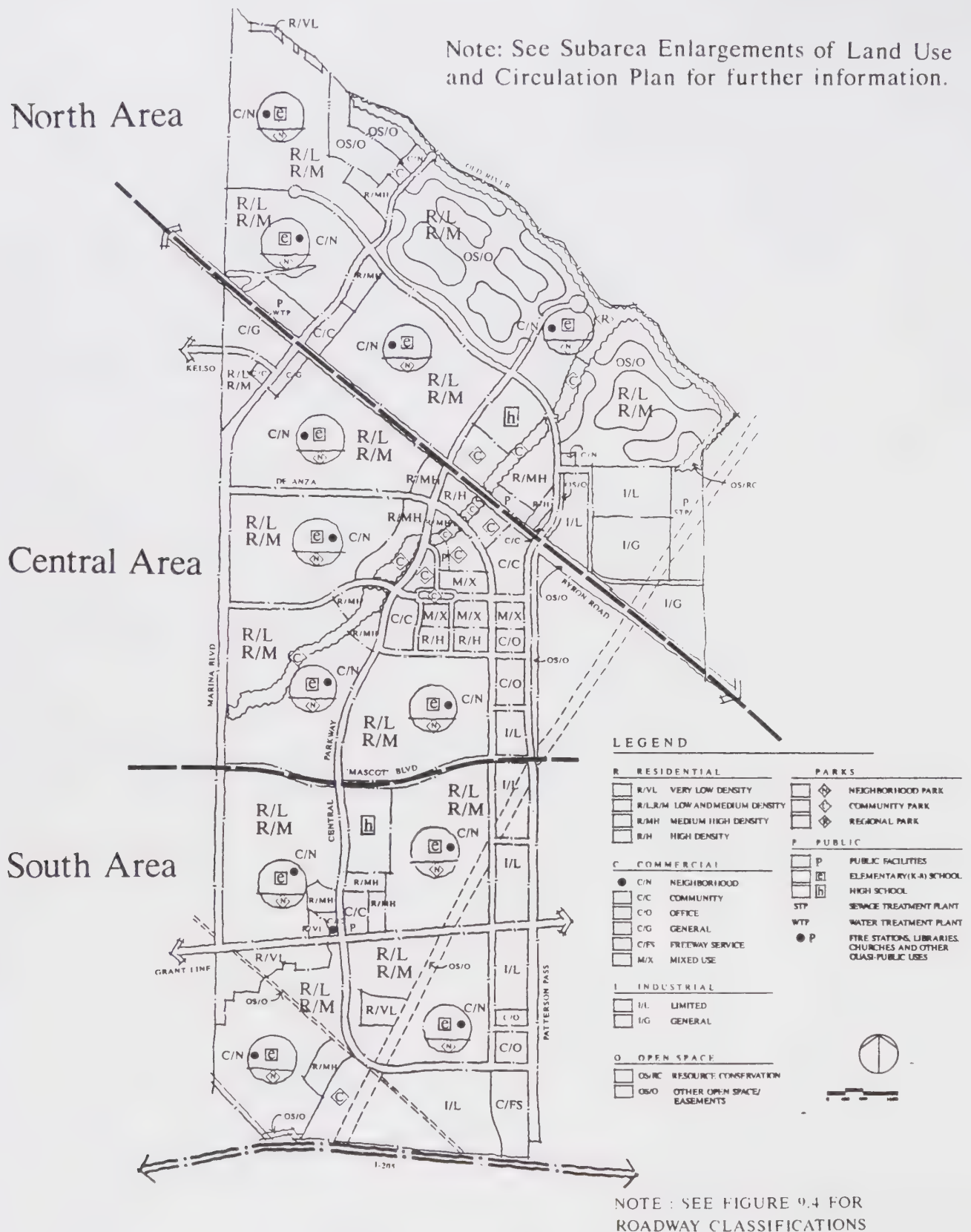
The land use program for Mountain House is summarized below in Table 3.1: Land Use Program. For each land use designation, the summary table indicates acreages, estimated numbers of dwelling units, population and employment figures. Final acreages for all land uses will be established by future Specific Plans.

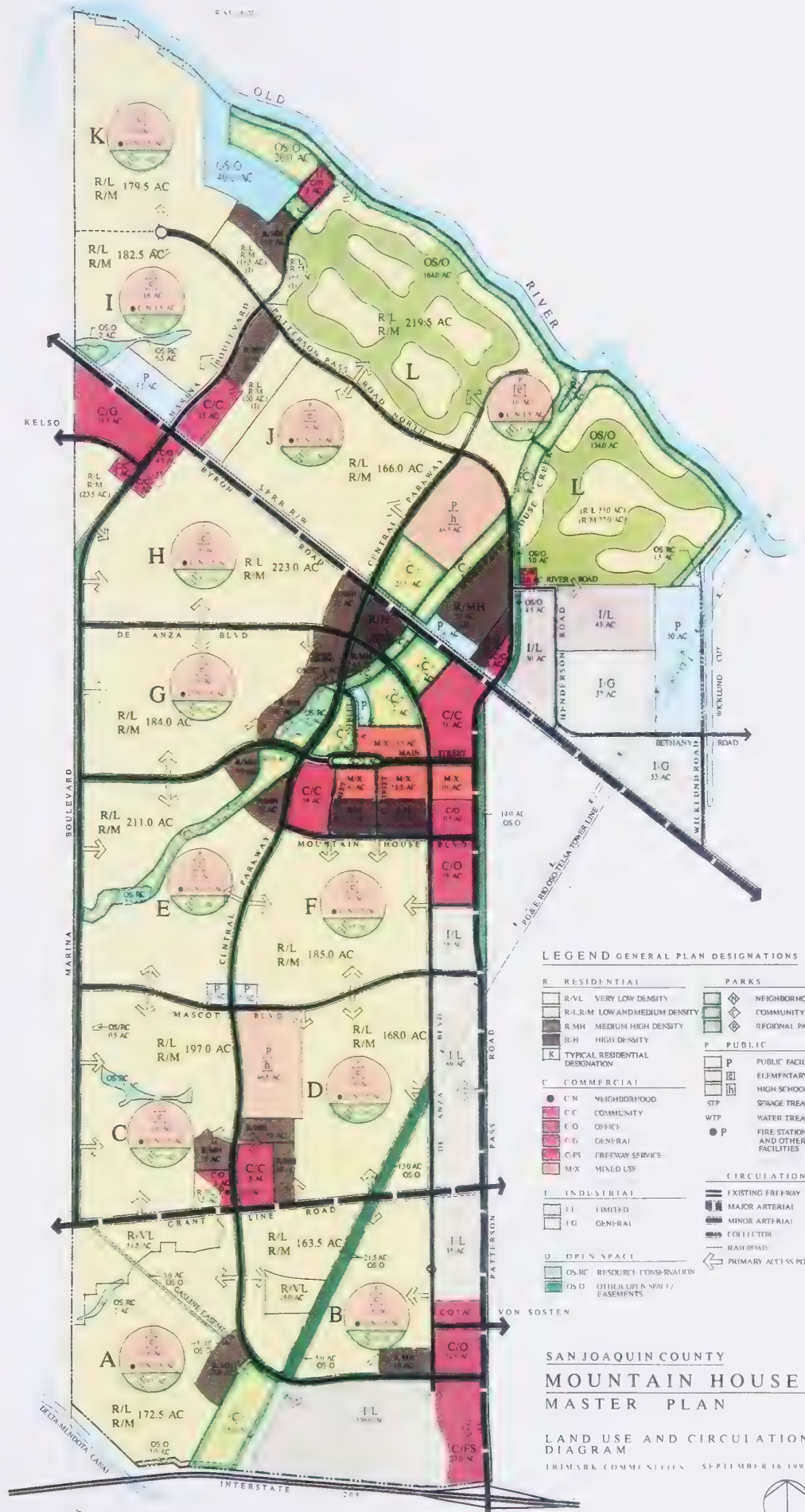
Table 3.2: Neighborhood Summary presents land uses in increments by Neighborhoods A through L. Land uses not located within or easily associated with a residential neighborhood are listed as "Other Areas."

3.2.3 Accuracy in Relationship to Specific Plans

The Master Plan establishes the maximum number of units within each neighborhood, which are based upon an average density for each land use designation (see Table 3.3: Maximum and Minimum Residential Units by Neighborhood).

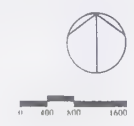
Future Specific Plans will define the boundaries of land use areas more precisely within each neighborhood, and will define zoning districts for each defined parcel (see Section 3.3: Land Use Regulations and Permitted Uses).

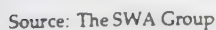




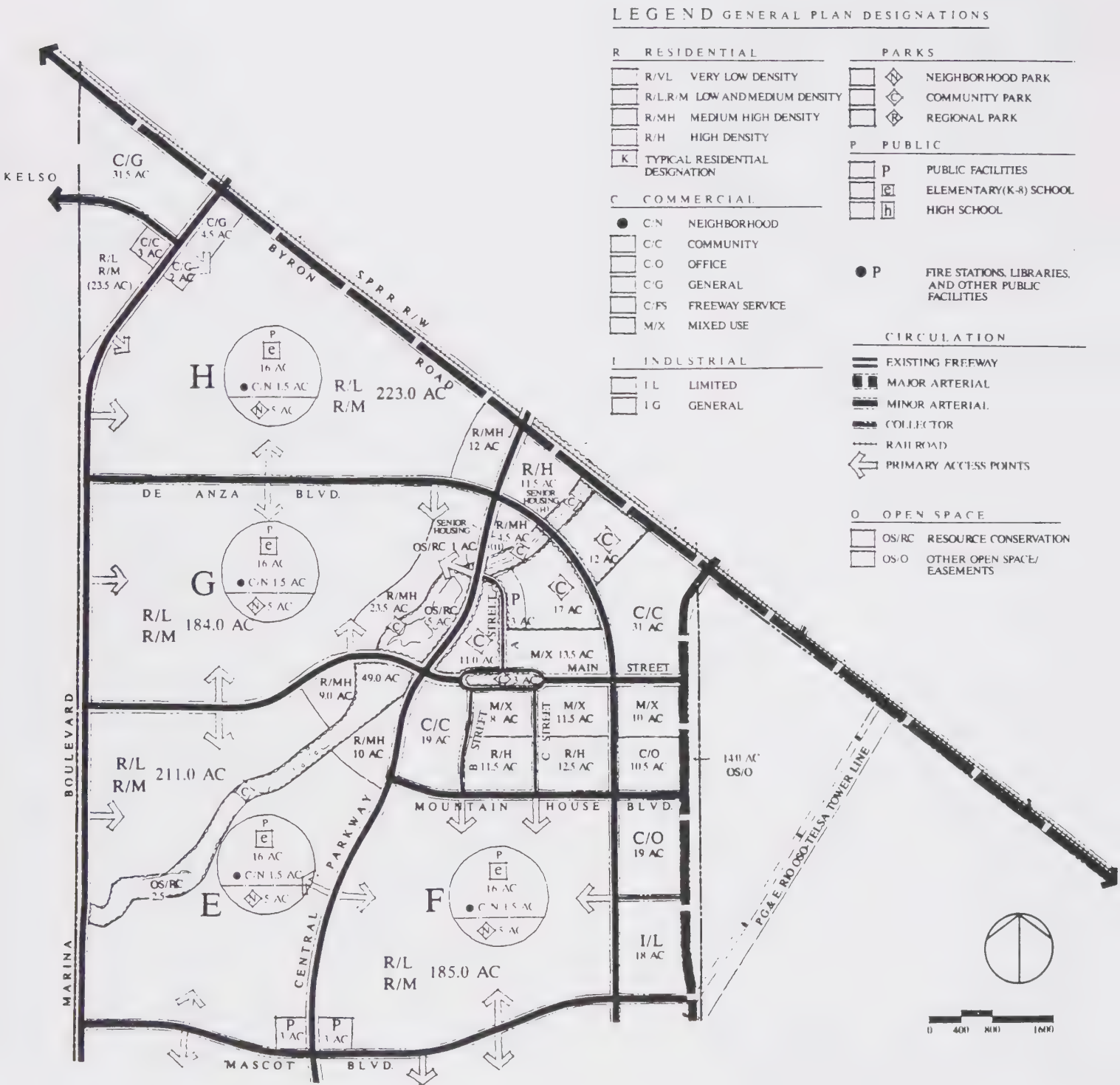
**SAN JOAQUIN COUNTY
MOUNTAIN HOUSE
MASTER PLAN**

**LAND USE AND CIRCULATION
DIAGRAM**
TRIMARK CONSULTANTS SEPTEMBER 16, 1994





Land Use & Circulation Plan: North Area



Source: The SWA Group

Land Use & Circulation Plan: Central Area

LEGEND GENERAL PLAN DESIGNATIONS

R RESIDENTIAL

- R/VL VERY LOW DENSITY
- R/L, R/M LOW AND MEDIUM DENSITY
- R/MH MEDIUM HIGH DENSITY
- R/H HIGH DENSITY
- K TYPICAL RESIDENTIAL DESIGNATION

C COMMERCIAL

- C/N NEIGHBORHOOD
- C/C COMMUNITY
- C/O OFFICE
- C/G GENERAL
- C/FS FREEWAY SERVICE

PARKS

- NEIGHBORHOOD PARK
- COMMUNITY PARK
- REGIONAL PARK

P PUBLIC

- P PUBLIC FACILITIES
- ELEMENTARY (K-R) SCHOOL
- H HIGH SCHOOL

- P FIRE STATIONS, LIBRARIES, AND OTHER PUBLIC FACILITIES

I INDUSTRIAL

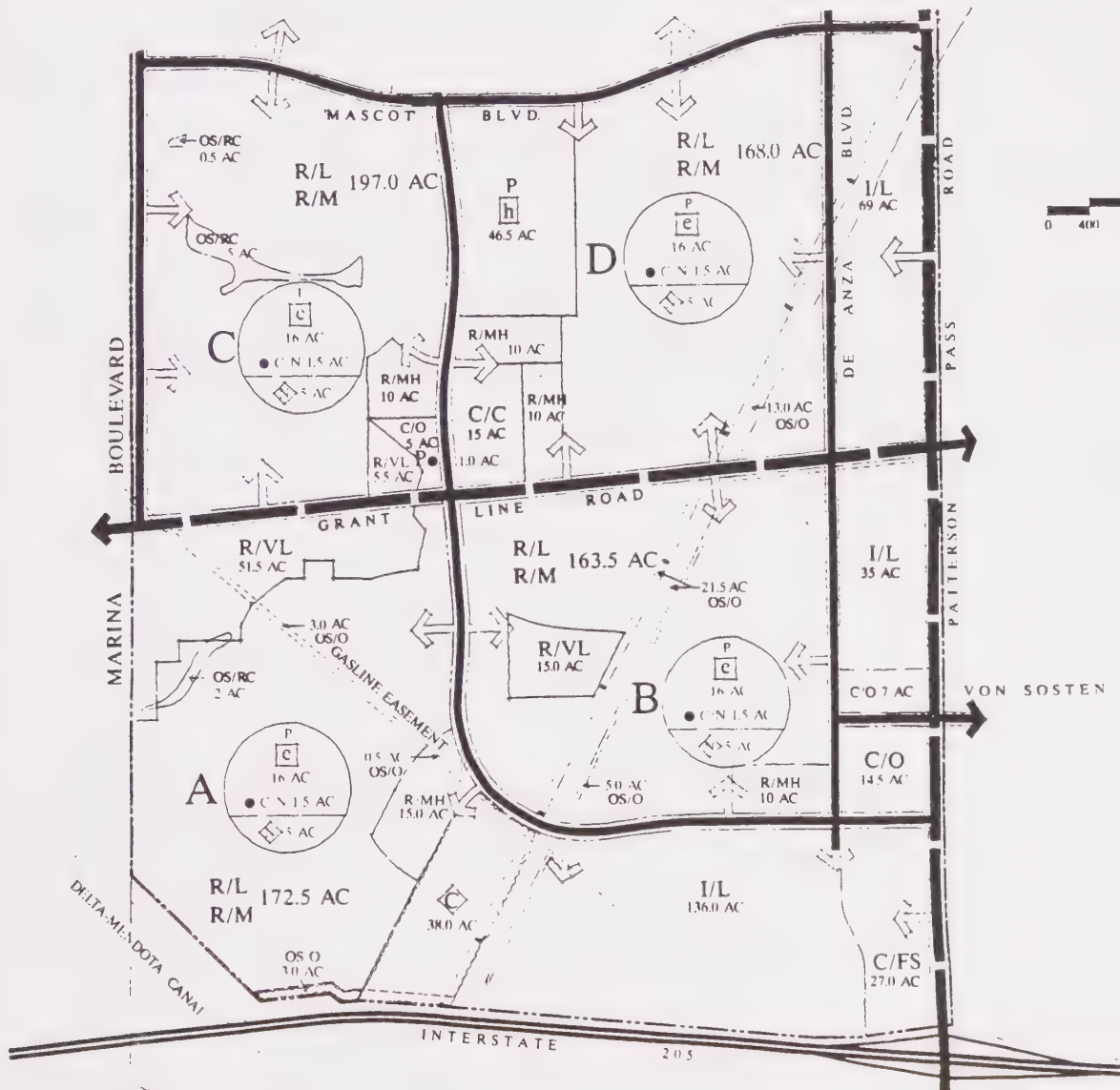
- I/L LIMITED
- I/G GENERAL

O OPEN SPACE

- OS/RC RESOURCE CONSERVATION
- OS/O OTHER OPEN SPACE/EASEMENTS

CIRCULATION

- EXISTING FREEWAY
- MAJOR ARTERIAL
- MINOR ARTERIAL
- COLLECTOR
- RAILROAD
- PRIMARY ACCESS POINTS



Land Use & Circulation Plan: South Area

Table 3.1: Land Use Program

MASTER PLAN LAND USE	DENSITY (DU/ GROSS AC)	PERSON/ DU	JOBS/ AC	GROSS ACRES	% ACRES	DU	% DU	POP.	JOBS
Very Low Density (R/VL)(4)	0.5-2.0	3.12		76.0	3.0%	82	0.5%	256	
Low Density (R/L)	2.0-6.0	3.12		1,088.5	43.1%	4882	30.3%	15,232	
Medium Density (R/M)	5.5-10.0	2.70		1,153.5	45.7%	8217	51.0%	22,186	
Medium-High Density (R/MH)	10.0 - 15.0	2.00		159.5	6.3%	1914	11.9%	3,828	
Senior Housing (R/MH)	10.0 - 15.0	2.00		4.5	0.2%	54	0.3%	108	
High Density (R/H)	15.0 - 40.0	2.00		30.5	1.2%	549	3.4%	1,098	
Senior Housing (R/H)	15.0 - 40.0	2.00		11.5	0.5%	207	1.3%	414	
Town Center Residential (M/X)	-	2.00				200	1.2%	400	
TOTAL RESIDENTIAL				2,524.0	100.0%	16,105	100.0%	43,522	
Limited Industrial-North of Byron (I/L)			26.0	73.0	10.2%				1,898
Limited Industrial-South of Byron (I/L)(3)			32.3	258.0	36.0%				8,333
General Industrial (I/G)			14.0	110.0	15.4%				1,540
Community Commercial (C/C)			24.0	88.0	12.3%				2,112
Mixed Use (M/X)			51.0	43.0	6.0%				2,193
Neighborhood Commercial (C/N)			24.0	25.0	3.5%				600
General Commercial (C/G)			24.0	36.0	5.0%				864
Office Commercial (C/O)			44.0	56.0	7.8%				2,464
Freeway Service Commercial (C/FS)			24.0	27.0	3.8%				648
TOTAL COMMERCIAL/INDUSTRIAL				716.0	100.0%				20,652
Elem./Middle Sch. (12 @ 16 acres ea)			2.5	192.0					480
High School (2 @ 46.5 acres ea)			2.5	93.0					233
TOTAL SCHOOLS				285.0					713
Neighborhood Parks (NP)			0.2	60.0	7.9%				12
Community Parks (CP)			0.2	179.5	23.6%				36
Regional Parks (RP)			0.2	70.0	9.2%				14
Golf Courses (OS/O)			30/GC	298.0	39.2%				60
Marina /Other O.S. (OS/O)			10 EA	62.0	8.2%				10
Wetland (OS/RC) *				23.0	3.0%				
Landscape Buffers (OS/O)				3.0	0.4%				
Easements (OS/O)(5)				64.0	8.4%				
TOTAL OPEN SPACE AND RECREATION				759.5	100.0%				132
Wastewater / Service Yards (P)			5.0	50.0					250
Water Treatment Plant (P)			5.0	18.5					93
Transit Center and Public (P)			5.0	9.0					45
Institutional (P)			5.0	8.0					40
Major Street R.O.W.				378.0					
Railroad R.O.W.				36.0					
TOTAL PUBLIC				499.5					428
TOTAL MOUNTAIN HOUSE				4,784.0		16,105		43,522	21,925

(1) *Does not include 1.76 acres within the Mountain House Creek Corridor/Community Park,

(2) All figures are based upon planimeter measurements. Final figures may vary slightly.

(3) Includes areas to be zoned I/P that will have higher employment generating uses.

(4) Includes 52 existing residential units, plus 30 planned, additional units.

(5) Includes major electric and gas transmission easements through residential areas, and the drainage easement east of Patterson Pass Road. Other easements are included within public rights-of-way or private parcels.

Table revised 9/6/94

Plan dated 4/5/94

Table 3.2
Land Use Summary
by Neighborhood

Note: See Figure 3.2 for
Neighborhood Boundaries
(Plan dated 4/5/94 - Revised: 9/6/94)

	Neighborhood									
	A		B		C		D		E	
GENERAL PLAN LAND USE	Gross AC	DU	Gross AC	DU	Gross AC	DU	Gross AC	DU	Gross AC	DU
RESIDENTIAL										
R/VL Residential/Very Low	51.5	51	15.0	12	5.5	8				
R/L Residential/Low	75.0	337	55.0	248	102.5	460	68.0	306	129.0	580
R/M Residential/Medium	97.5	700	108.5	793	89.0	682	100.0	706	82.0	570
R/MH Residential/Medium High	15.0	180	10.0	120	10.0	120	20.0	240	19.0	228
R/MH Senior Housing										
R/H Residential/High										
R/H Senior Housing										
SUBTOTAL	239.0	1,268	188.5	1,173	207.0	1,270	188.0	1,252	230.0	1,378
COMMERCIAL										
C/N Neighborhood	1.5		1.5		1.5		1.5		1.5	
C/C Community							15.0			
C/G General										
C/O Office					5.0					
C/FS Freeway Service										
M/X Mixed Use										
SUBTOTAL	1.5		1.5		6.5		16.5		1.5	
INDUSTRIAL										
I/L Limited Industrial (N. of Byron)										
I/L Limited Industrial (S. of Byron)										
I/G General Industrial										
SUBTOTAL										
OPEN SPACE										
NP Neighborhood Park	5.0		5.0		5.0		5.0		5.0	
CP Community Park	38.0								32.0	
RP Regional Park										
OS/O Golf Course										
OS/O Marina/Other O.S.										
OS/RC Wetland	2.0				5.5				2.5	
OS/O Landscape Buffers	3.0									
OS/O Easements	3.0		26.5				13.0			
SUBTOTAL	51.0		31.5		10.5		18.0		39.5	
SCHOOLS										
K-8 (12 @ 16 AC)	16.0		16.0		16.0		16.0		16.0	
High School (2 @ 46.5 AC)										
SUBTOTAL	16.0		16.0		16.0		16.0		16.0	
PUBLIC										
P Water Treatment										
P Wastewater/Service Yards										
P Transit										
P Institutional									3.0	
P Public Facilities							1.0			
Major Street ROW										
Railroad ROW										
SUBTOTAL	0.0		0.0		0.0		1.0		3.0	
TOTALS	308	1,268	238	1,173	240	1,270	240	1,252	290	1,378

Table 3.2
Land Use Summary
by Neighborhood

Note: See Figure 3.2 for
Neighborhood Boundaries

(Plan dated 4/5/94 - Revised: 9/6/94)

	F		G		H		I		J		K	
GENERAL PLAN LAND USE	Gross AC	DU	Gross AC	DU	Gross AC	DU	Gross AC	DU	Gross AC	DU	Gross AC	DU
RESIDENTIAL												
R/VL Residential/Very Low											4.0	11
R/L Residential/Low	121.0	527	86.0	388	143.0	644	75.0	338	65.0	293	66.0	297
R/M Residential/Medium	64.0	440	98.0	692	80.0	550	107.5	775	101.0	714	109.5	790
R/MH Residential/Medium High			23.5	282	12.0	144	10.0	120	30.0	360	10.0	120
R/MH Senior Housing					4.5	54						
R/H Residential/High	24.0	432							6.5	117		
R/H Senior Housing					11.5	207						
SUBTOTAL	209.0	1,399	207.5	1,362	251.0	1,599	192.5	1,233	202.5	1,484	189.5	1,218
COMMERCIAL												
C/N Neighborhood	1.5		1.5		1.5		1.5		1.5		6.5	
C/C Community	19.0				5.0		15.0		3.0			
C/G General												
C/O Office												
C/FS Freeway Service												
M/X Mixed Use												
SUBTOTAL	20.5		1.5		6.5		16.5		4.5		6.5	
INDUSTRIAL												
I/L Limited Industrial (N. of Byron)												
I/L Limited Industrial (S. of Byron)												
I/G General Industrial												
SUBTOTAL												
OPEN SPACE												
NP Neighborhood Park	5.0		5.0		5.0		5.0		5.0		5.0	
CP Community Park	11.0		11.0		36.0				36.5		3.0	
RP Regional Park												
OS/O Golf Course												
OS/O Marina/Other O.S.							2.0				60.0	
OS/RC Wetland			5.0				6.5					
OS/O Landscape Buffers												
OS/O Easements												
SUBTOTAL	16.0		21.0		41.0		13.5		41.5		68.0	
SCHOOLS												
K-8 (12 @ 16 AC)	16.0		16.0		16.0		16.0		16.0		16.0	
High School (2 @ 46.5 AC)												
SUBTOTAL	16.0		16.0		16.0		16.0		16.0		16.0	
PUBLIC												
P Water Treatment												
P Wastewater/Service Yards												
P Transit												
P Institutional	3.0											
P Public Facilities					1.0							
Major Street ROW												
Railroad ROW												
SUBTOTAL	3.0		0.0		1.0		0.0		0.0		0.0	
TOTALS	265	1,399	246	1,362	316	1,599	239	1,233	265	1,484	280	1,218

Table 3.2
Land Use Summary
by Neighborhood

Page 3

Note: See Figure 3.2 for
Neighborhood Boundaries

(Plan dated 4/5/94 - Revised: 9/6/94)

	L		Town Center		Other Areas	TOTALS		
GENERAL PLAN LAND USE	Gross AC	DU	AC	DU	Gross AC	Gross AC	DU	SF
RESIDENTIAL								
R/VL Residential/Very Low						76.0	82	
R/L Residential/Low	103.0	464				1,088.5	4,882	
R/M Residential/Medium	116.5	805				1,153.5	8,217	
R/MH Residential/Medium High						159.5	1,914	
R/MH Senior Housing						4.5	54	
R/H Residential/High				200		30.5	749	
R/H Senior Housing						11.5	207	
SUBTOTAL	219.5	1,269		200	0.0	2,524.0	16,105	
COMMERCIAL								
C/N Neighborhood	3.5					25.0		272,300
C/C Community					31.0	88.0		958,300
C/G General					36.0	36.0		392,100
C/O Office					51.0	56.0		853,800
C/FS Freeway Service					27.0	27.0		352,800
M/X Mixed Use			43.0			43.0		1,873,100
SUBTOTAL	3.5		43.0		145.0	275.0		4,702,400
INDUSTRIAL								
I/L Limited Industrial (N. of Byron)					73.0	73.0		1,272,000
I/L Limited Industrial (S. of Byron)					258.0	258.0		4,495,400
I/G General Industrial					110.0	110.0		1,916,600
SUBTOTAL					441.0	441.0		7,684,000
OPEN SPACE								
NP Neighborhood Park	5.0					60.0		
CP Community Park	9.0		3.0			179.5		
RP Regional Park					70.0	70.0		
OS/O Golf Course	298.0					298.0		
OS/O Marina/Other O.S.						62.0		
OS/RC Wetland	1.5					23.0		
OS/O Landscape Buffers						3.0		
OS/O Easements					21.5	64.0		
SUBTOTAL	313.5				91.5	759.5		
SCHOOLS								
K-8 (12 @ 16 AC)	16.0					192.0		
High School (2 @ 46.5 AC)					93.0	93.0		
SUBTOTAL	16.0					285.0		
PUBLIC								
P Water Treatment					18.5	18.5		
P Wastewater/Service Yards					50.0	50.0		
P Transit					9.0	9.0		
P Institutional						6.0		
P Public Facilities						2.0		
Major Street ROW					378.0	378.0		
Railroad ROW					36.0	36.0		
SUBTOTAL	0.0				491.5	499.5		
TOTALS	553	1,269	43	200	1,169	4,784	16,105	12,386,400

3.2.4 Pre-Existing Land Uses Within Mountain House

When the Mountain House new community boundaries were established, most of the land was in agricultural production. A farm produce stand is the one non-agricultural commercial use. It is expected that more intensive commercial uses will develop on this site. ~~However,~~

Some scattered residential areas ~~are were also~~ included in the community. This section discusses the status of these lands and sets forth policies that 1) address the unique status of the existing residential areas and 2) provide for the logical transition of agricultural operations to development as an urban community.

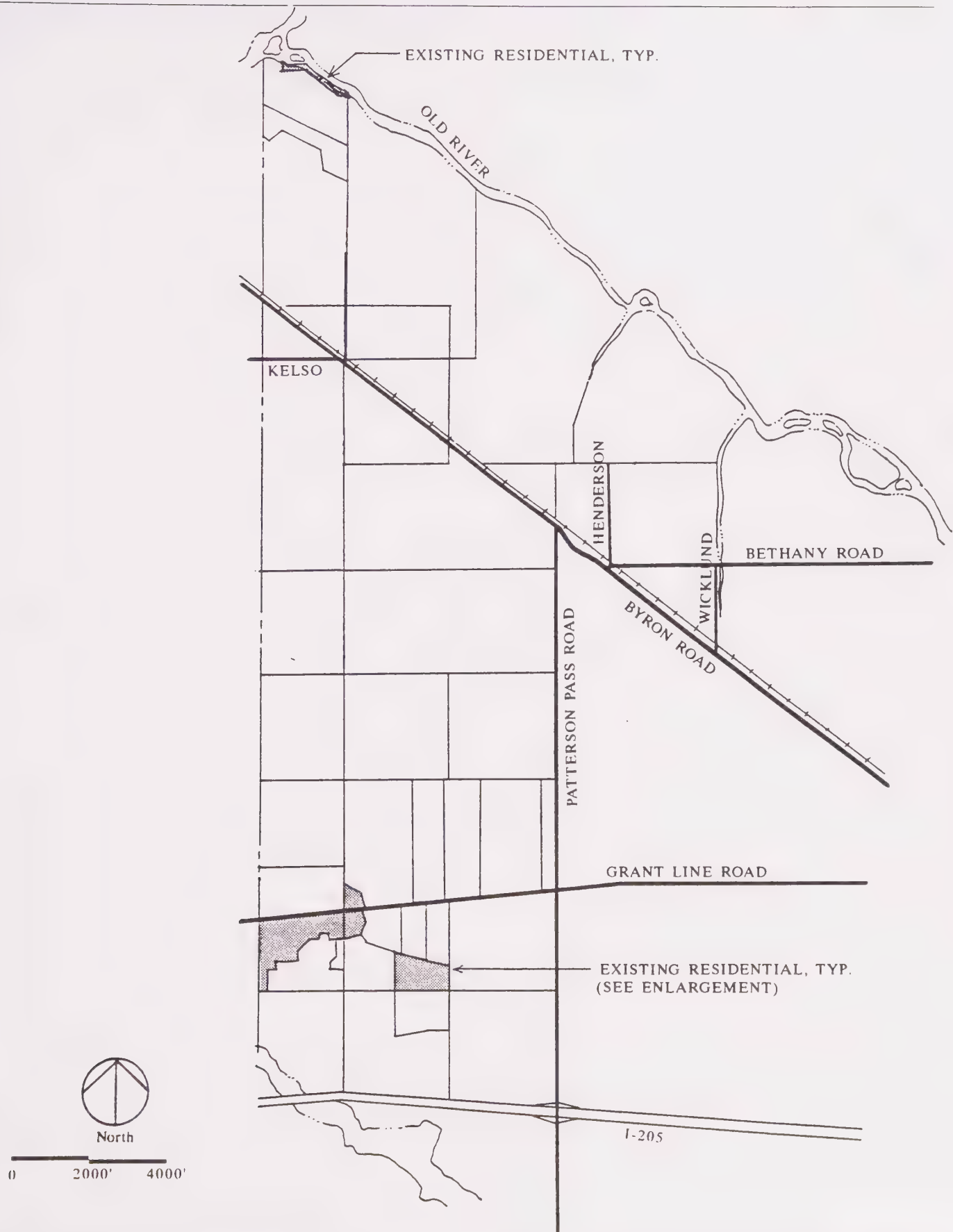
Pre-Existing Residential Areas

Within the Mountain House boundaries are three distinct residential areas that were in place before the new community was established. The largest is "Grant Line Village" which includes approximately 48 parcels south and north of Grantline Road adjacent to the County line. The second area is that of the "Homesite Parcels", a grouping of five large rural residential lots within Neighborhood B. The third area consists of the "Old River Homesites" along the Old River levee in the northwest corner of the community in Neighborhood K. These areas are shown in Figure 3.9: Pre-Existing Residential Areas and Figure 3.10: Pre-Existing Residential/Enlargement at Grant Line Road.

It is anticipated that these residential areas will remain in their current configuration for some time to come, and will not be replaced with "new community" type development. Within each of these areas there are limited opportunities for additional homes to be built. It is the intent of this section to allow limited development to proceed without the requirements for urban services that will be required for all other new community development. It is also the intent of this section to ensure that Specific Plans for urban development adjacent to these areas minimize potential conflicts with these rural homesites.

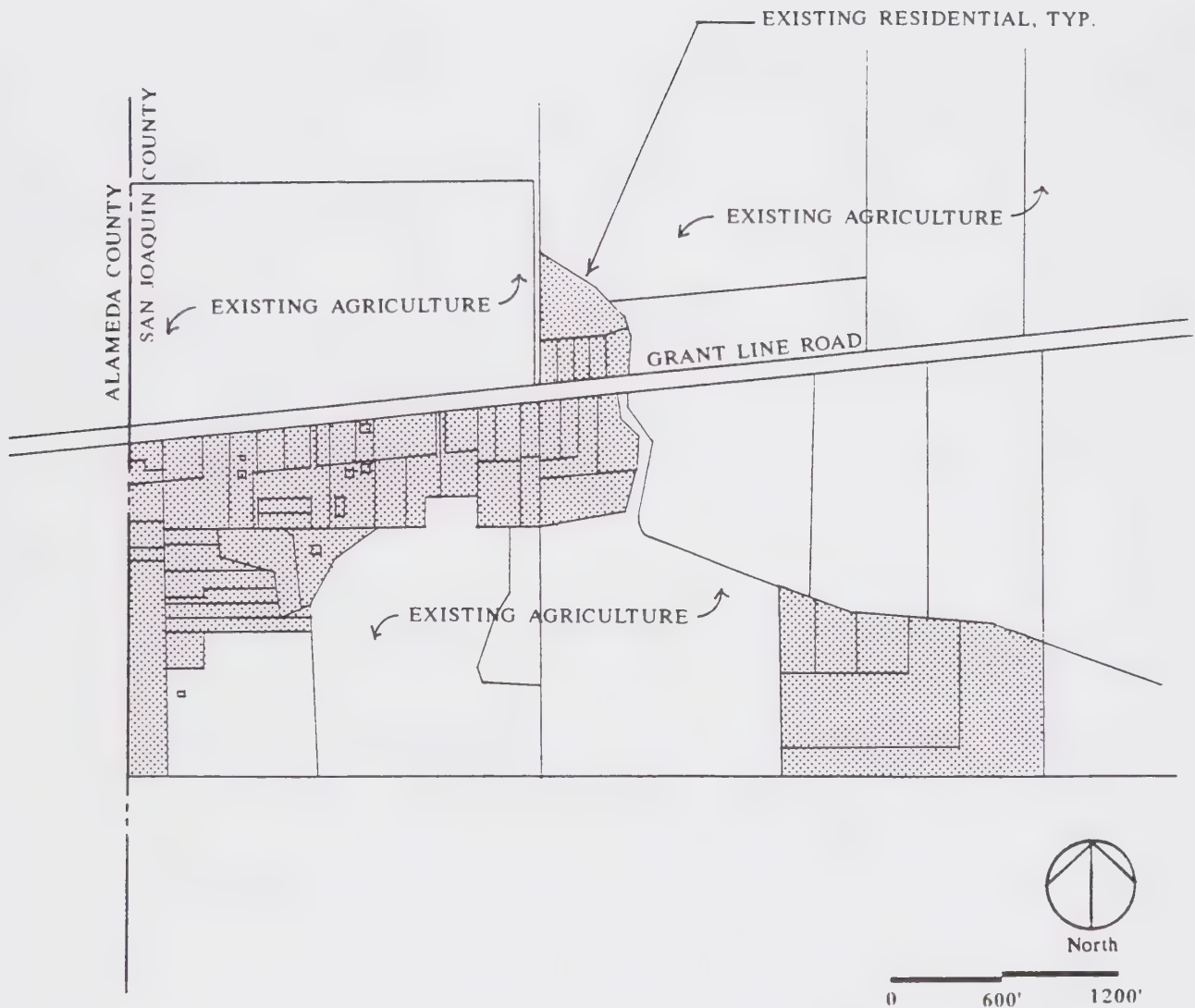
Policies:

- a) Pre-existing residential areas (Grantline Village, Homesite Parcels, and Old River Homesites) shall be designated Very Low Density Residential (R/VL) in the General Plan.
- b) Pre-existing residential areas shall be zoned Agricultural-Urban Reserve (AU-20) until they are to be developed with urban services.
- c) Pre-existing residential areas may connect to public sewer, water and drainage systems without the requirement of a Specific Plan, provided the use remains one allowable under the AU-20 zone and is compatible with adjacent urban uses, either existing or planned.
- d) The AU-20 zone may be changed to an urban zone when a Specific Plan is approved for a pre-existing residential area.
- e) The "Old River Homesites" area shall be included in the Specific Plan for Neighborhood K, and the "Homesite Parcels" areas shall be included in the Specific Plan for Neighborhood B, to ensure that these areas are taken into consideration when adjacent urban development is proposed.



Pre-existing Residential Areas

Source: The SWA Group



Pre-existing Residential Areas/Enlargement at Grant Line Road

Source: The SWA Group

- f) Specific Plans for areas adjacent to pre-existing residential areas which will remain in residential use shall include provisions to ensure land use compatibility between proposed and existing uses, and shall plan for future extension of urban services and facilities into these areas.

Interim Agricultural Operations

The new community of Mountain House will build out over a period of years. Although agricultural operations will be phased out as development occurs, interim agricultural enterprises should be encouraged and protected. Provisions have been included here and in Chapter Twelve (Potable Water Systems) to ensure that agricultural enterprises remain viable as long as practical. An objective of this Master Plan is to provide protection for agricultural uses in a manner that is consistent with the development of an urban community.

- g) To the extent feasible, phasing of development within neighborhoods shall allow continuation of adjacent agricultural operations.
- h) Development adjacent to existing agricultural operations shall utilize interim or permanent setbacks, landscape buffers, fencing or walls to minimize noise, spray drift, and limit the potential for trespass.
- i) Development near and adjacent to existing agricultural operations shall ensure protection of agricultural water supplies (see Chapter Twelve).
- k) ~~Development shall be monitored to assess the success of these measures in protecting existing agricultural operations, and in providing an orderly transition from agricultural to urban uses.~~

Implementation:

- a) Existing Residential Development. Areas of existing residential development shall be zoned R-VL when public services become available.
- b) Notification of Agricultural Uses. Final Map recordation for residential development shall require recording notification on the face of each parcel's Deed of the County's Right-to-Farm Ordinance and notification of any specific, adjacent, unique agricultural uses.
- c) Notification to Residential Buyers. All buyers of residential areas adjacent to existing agricultural operations shall be notified of the County's Right to Farm Ordinance. Additionally, buyers shall be notified of unique agricultural uses or operations (such as dairy operation, manure spreading, etc.,) which may have an impact on adjacent residential uses.

3.2.5 Description of Planned Land Uses

Land use categories are briefly described below. Policies for each land use are found in Sections 3.4: Residential Objectives and Policies, through 3.8: Public and Institutional Use Policies, of this chapter. Special housing types such as second units will be allowed as specified in Section 3.9: Jobs/Housing and Affordable Housing, and Section 3.3.4: Second Units.

Very Low Density Residential (R/VL)

R/VL uses consist of relatively large lot, single family detached homes, that occur in four separate locations. Within neighborhood A, the R/VL land use includes existing Grant Line Village, south of Grant Line Road. Within neighborhood B, the R/VL land use surrounds the existing low density residential uses west of the PG&E Rio Oso-Tesla tower line. In neighborhood K, the R/VL includes the homesites along the Old River levee. Special development provisions that apply to these areas are set forth in the previous Section. The proposed R/VL area in neighborhood B will serve to transition from the four existing homesites to the adjacent low and medium density areas.

Low Density Residential (R/L)

Low Density Residential uses include a variety of single family dwelling unit types. Product types may include large-lot single family homes, to small lot zero lot line "patio" homes.

Medium Density Residential (R/M)

Medium Density Residential uses comprise approximately one-half of all homes within Mountain House. These areas will provide a wide variety of dwelling unit types, which include both detached and attached homes and may include small lot detached units, duplexes, triplexes, low density town homes, mobile homes or other housing types, such as second units.

Medium-High Density Residential (R/MH)

Medium-High Density Residential areas are located near natural amenities, primarily along the Mountain House Creek corridor. R/MH uses are also located near village commercial centers, Town Center, and other higher intensity use areas, with the result that almost every neighborhood includes some of this type of housing. Housing types may include townhomes, garden apartments, and other attached residential uses. R/MH uses include one site in neighborhood H, near Town Center, which is designated for senior housing.

High Density Residential (R/H)

High Density Residential uses are located near the Town Center and will provide housing in close proximity to shopping, entertainment, employment and recreation uses. One R/H site along Mountain House Creek, north of the Town Center has been designated for senior housing.

Mixed Use (M/X)

The Mixed Use areas are included within the Town Center, which serves as the urban center for Mountain House, providing a central location for community activities such as parades, exhibits, shows, and other civic functions which give identity and interest to the lifestyle of a community

The Town Center provides for an integration of land use types, including office, retail, recreation, public, and residential uses in close proximity to high density housing. Higher densities, shared facilities, an urban town park, and a concentration of civic and commercial uses will characterize the Town Center and create a focal point of activity within the community. The M/X designation allows for more urban densities, innovative design, and a more efficient land and infrastructure utilization than would be permitted under other traditional designations.

Neighborhood Commercial (C/N)

The purpose of a Neighborhood Commercial area is to provide for small, localized retail and service businesses that offer goods and merchandise, located within easy pedestrian and bicycle access to the immediate neighborhood. Each neighborhood includes a one and one-half acre site to serve residents with a mini grocery, barber shop, cleaners, real estate offices, or similar businesses. These sites may also include professional services such as physician's offices, telecommuting center or other, public or institutional uses. Neighborhood Commercial uses also serve special areas such as the marina and golf course areas.

Community Commercial (C/C)

A Community Commercial area provides a full range of retail and service establishments, allowing comparison shopping and serving the daily shopping needs of the community. Several distinct areas of C/C use are provided, each with a separate function, including: three Village Centers of 15-20 acres each, serving groups of four neighborhoods; the Central Commercial area, a larger 33-acre site northeast of Town Center, serving the overall community; and several satellite sites designated near Byron Road, Patterson Pass and Marina Boulevard. Village Centers are intended to accommodate a shopping center offering a full-service grocery, drugstore, retail shop, services or other uses. The larger site northeast of Town Center is intended to provide an additional major shopping area for the entire community, offering a wider range of products and services than the Village Centers.

General Commercial (C/G)

General Commercial areas will provide for retail and service uses that generally require special purpose trips rather than providing daily shopping needs. These uses are typically oriented to automobile use and include business such as discount stores, automobile repair establishments, and retail or wholesale nurseries. General commercial uses are located near Byron and Kelso Roads in the northwest portion of the Master Plan area, just south of Byron Road. These sites are intended to provide convenient automobile access while minimizing impacts on nearby residential neighborhoods.

Freeway Service Commercial (C/FS)

Freeway Service Commercial areas accommodate businesses that serve freeway travelers and need the exposure and access provided by a freeway location. Such businesses include gas stations, restaurants, motels, and certain retail stores. Additionally, Freeway Service areas include uses which will support nearby employment areas. Freeway Service Commercial uses are designated along Patterson Pass Road near the I-205 interchange.

Office Commercial (C/O)

Office Commercial areas support administrative and professional office development. The Master Plan locates Office Commercial uses along Patterson Pass Road near the Town Center, near the freeway interchange, and in conjunction with the Community Commercial center along Grant Line Road.

Limited Industrial (I/L)

Limited Industrial areas are intended to accommodate modern business park developments that provide little or no nuisance activities and are therefore suitable for location along major community roadways and near residential neighborhoods. Typical uses include light manufacturing, electronics, high technology businesses, and light warehousing, as well as office uses to support these functions. The primary location of Limited Industrial land use occurs in the business park adjacent to I-205 and Patterson Pass Road. Other sites are located along Patterson Pass Road and in the northeast

portion of the community. In future Specific Plans south of Byron Road, this land use will be designated as the I-P (Industrial Park) zoning classification in order to insure compatibility with adjacent residential areas, and to provide flexibility for future employment uses.

General Industrial (I/G)

General Industrial areas include industrial activities with moderate to high nuisance characteristics, requiring segregation from other land uses. Typical uses include manufacturing, distribution, storage and wholesaling. All General Industrial areas are located north of Byron Road, near the wastewater treatment site and maintenance yards.

Public and Institutional Land Uses (P)

Public and institutional land uses include schools, medical facilities, places of religious assembly, public buildings and infrastructure facilities such as the sewer/waste treatment plants, water treatment plant, and transit center.

Schools: The Master Plan establishes sites for 12 K-8 schools of up to 16 acres each, and two high schools of up to 46.5 acres each. School sizes have been calculated to serve the projected population of the community based on the standards of local school districts. The high school located at Mascot Drive and Central Parkway is intended to serve the first Specific Plan area, while the high school located along Patterson Pass Road and Central Parkway north of Byron Road will serve later phases. School vehicles and corporation yard activities for all schools will be located in the Community Services District (CSD) corporation yard near the wastewater treatment site. Schools are further described in Chapter Five: Education and Child Care.

Sewer/Waste Utility Area (P): A site designated for public use is located north of Byron Road along the eastern edge of the community. The site is planned to accommodate the wastewater treatment plant facilities as well as other functions such as recycling, waste transfer areas, a Community Services District corporation yard, and any additional required school district corporation yard(s). Wastewater treatment, disposal and reclamation is described further in Chapters Thirteen: Wastewater Treatment and Collection System, and Fourteen: Wastewater Reuse.

Water Treatment Plant (P): The water treatment plant is located within an area designated for public use along the west edge of the community, north of Byron Road, and west of Marina Boulevard. This facility is described further in Chapter Thirteen.

Transit Center (P): The transit center is centrally located along Byron Road between Central Parkway and Patterson Pass Road. A public use site south of Byron Road is intended as ancillary parking for the Center, with direct pedestrian connections via the Mountain House Creek corridor. Chapters Nine: Transportation and Circulation, and Ten: Air Quality and Transportation Management, provide further information on transit facilities and requirements.

Fire Stations (P): Two fire station sites are identified within the community in order to provide fire protection in accordance with the standards established in Chapter Six: Public Health and Safety.

Open Space and Recreation Uses (OS)

Open Space and Recreation areas within Mountain House include a variety of types, ranging from small neighborhood parks to regional park, trail systems, and golf courses.

Neighborhood Parks: Each of the 12 neighborhoods at Mountain House includes a centrally located neighborhood park of approximately five acres located adjacent to the neighborhood K-8 school. The neighborhood parks will be developed and operated in coordination with the schools, and will provide for active recreation activities within pedestrian and bicycle access of neighborhood residents. Facilities within neighborhood parks will include swimming pool, hard surface courts, playgrounds, field games, picnic tables, and free play areas.

Community Parks: Community parks are located to provide easy access from neighborhoods, and to make use of the Mountain House Creek corridor. Much of the acreage allocated to community parks is located along Mountain House Creek, with major parks sited just north of the Town Center. Additional community parks are located south of Central Parkway adjacent to neighborhood "A" and north of Byron Road adjacent to the High School and Marina to serve areas more distant from the Creek and Town Center. Community parks are intended to provide active recreation facilities such as athletic fields and complexes, swimming pools, tennis/racquet courts, and for passive uses such as picnicking, jogging/walking/bicycle paths, and nature areas.

A portion of acreage designated for parks may be utilized for community facilities such as senior centers, swimming pools, stadiums, or libraries provided overall minimum County park standards are met.

Regional Park: The 70-acre regional park consists of a riverfront park along the Old River edge. This location makes use of the river's open space, wildlife and scenic values to provide a regional open space and recreational resource. This linear park extends from the marina in the northwest to the Westside Irrigation Canal in the northeast corner of the community, and includes the mouth of Mountain House Creek where it joins Old River.

Resource Conservation (OS/RC): The Master Plan designates as Resource Conservation areas the existing wetlands located in the Mountain House Creek corridor, in the northwest area of the community north of Byron Road, in the northeast along Wicklund Cut, and in the southwest area of the community north of Grant Line Road (see Chapter Seven: Recreation and Open Space). This land use designation is intended to preserve the existing wetlands within the Master Plan area.

Golf Courses (OS/O): Two 18-hole golf courses are located north of Byron Road. Both courses are approximately 150 acres in size, are bordered primarily by residential uses, and are each served by a separate clubhouse and related facilities.

Marina (OS/O): The 60-acre marina site is located along Old River in the northwest corner of the community. The marina includes 40 acres of water and 20 acres of land area for parking, boat storage and service, and buildings (see Chapter Seven for further description).

3.3 LAND USE REGULATIONS AND PERMITTED USES

Land use regulations are the same as those in the County Development Title unless otherwise specified in the Mountain House referenced in the Development Title. ~~and specified in the Master Plan.~~

The overall objective of land use regulations is to provide for the orderly development of the community, create a full range of land uses, and avoid land use conflicts.

3.3.1 Residential Densities and Unit Totals

In order to ensure orderly growth and to generally maintain the planned residential density within the community, the Master Plan limits the number of residential units in each residential category, in each neighborhood, to a minimum and maximum number. The minimum and maximum number of residential units in each land use district is directly related to a corresponding minimum and maximum density. Most residential developments (i.e., subdivisions) within Mountain House are expected to develop within the density ranges defined by these minimum and maximum densities. For those residential developments that desire a development density outside of these allowed neighborhood minimum or maximum densities, there are policies which provide for this possibility, provided certain conditions are met (see below). The intent is to require each neighborhood to develop within the maximum and minimum density range as shown on Table 3.3, while allowing individual residential subdivisions to develop within the General Plan density range for the land use district, as shown on Table 3.1.

Assumptions:

- a) Potential residential units are determined by multiplying the Master Plan acreage for each residential land use district within each neighborhood by the corresponding and respective minimum/ maximum density specified in Table 3.3: Neighborhood Maximum and Minimum Residential Units.
- b) Acreage used in residential density calculations exclude the following:
 - All Arterial street rights of way.
 - Major utility transmission easements.
 - Railroad rights of way
 - Creek corridors and wetland areas identified in the Master Plan.
 - Non-residential land uses including uses that may be added at a later date.
- c) Acreage included in residential density calculations consist of the following:
 - Local roads and Collectors internal to each neighborhood,
 - Land used in the actual subdivision including any additional neighborhood open space, median landscaping or private recreation areas.

Policies:

- a) In each neighborhood a minimum and maximum number of residential units and a corresponding minimum and maximum density shall be established for each residential land use district as specified in Table 3.3: Neighborhood Maximum and Minimum Residential Units.
- b) Development of any residential subdivision within a neighborhood shall occur within the minimum / maximum density range of the residential land use district in which it is located with the following exceptions: ~~if the following occurs:~~

- A residential subdivision may develop at a density which exceeds the maximum density for the land use district in which it is located if the following occurs:
 - 1) The number of excess units proposed to be built is equal to or less than the number of unallocated units from the prior approved subdivisions within the neighborhood; and
 - 2) the resulting density by land use district for the proposed subdivision does not exceed the General Plan density for each land use district as shown by Table 3.1.
- A residential subdivision may develop at a density which falls below the minimum density for the land use district in which it is located if the following occurs:
 - 1) The number of units from the proposed subdivision plus the number of units from prior approved subdivisions within the neighborhood result in a density that falls within the minimum / maximum density range for the subject land use district; and
 - 2) the resulting density by land use district for the proposed subdivision is at least equal to the General Plan density for each land use district as shown by Table 3.1.
- e) ~~The above policies relating to the control of density shall not apply to Extra Allowable Units as described in the Affordable Housing Program, Section 3.9.3.~~
- c) Future Specific Plans may ~~shall consider~~ adding the shortfall (i.e. the difference between neighborhood maximum and minimum density [units]) experienced in prior Specific Plans. Inclusion of such units into future Specific Plans shall require an amendment to this Master Plan and possible additional environmental review.

Implementation:

- a) ~~The approval of~~ Compliance of Tentative Maps. Approved tentative subdivision maps in the community shall be monitored by the County to determine to ensure compliance with maximum and minimum residential unit and density requirements. ~~Monitoring results will be included in the Annual Community Report.~~

Table 3.3
Neighborhood Minimum and Maximum Residential Units

4/6/1994 (Revised 9/7/94)

		Gross Area	Maximum Density ^{(1),(2)}	Maximum Units	Minimum Density ^{(1),(2)}	Minimum Units			Gross Area	Maximum Density	Maximum Units	Minimum Density	Minimum Units
Neighborhood		(AC)	(DU/AC)	Units	(DU/AC)	Units	Neighborhood		(AC)	(DU/AC)	Units	(DU/AC)	Units
A	R/VL	51.5	0.99	51	0.99	51	H	R/VL	0.0	1.00	0	1.00	0
	R/L	75.0	4.49	337	4.04	303		R/L	143.0	4.50	644	4.05	580
	R/M	97.5	7.18	700	5.74	560		R/M	80.0	6.88	550	5.50	440
	R/MH	15.0	12.00	180	12.00	180		R/MH	16.5	12.00	198	12.00	198
	R/H	0.0	18.00	0	18.00	0		R/H	11.5	18.00	207	18.00	207
	Total	239.0		1,268		1,094		Total	251.0		1,599		1,425
B	R/VL	15.0	0.80	12	0.80	12	I	R/VL	0.0	1.00	0	1.00	0
	R/L	55.0	4.51	248	4.06	223		R/L	75.0	4.51	338	4.06	304
	R/M	108.5	7.31	793	5.85	634		R/M	107.5	7.21	775	5.77	620
	R/MH	10.0	12.00	120	12.00	120		R/MH	10.0	12.00	120	12.00	120
	R/H	0.0	18.00	0	18.00	0		R/H	0.0	18.00	0	18.00	0
	Total	188.5		1,173		990		Total	192.5		1,233		1,044
C	R/VL	5.5	1.45	8	1.45	8	J	R/VL	0.0	1.00	0	1.00	0
	R/L	102.5	4.49	460	4.04	414		R/L	65.0	4.51	293	4.06	264
	R/M	89.0	7.66	682	6.13	546		R/M	101.0	7.07	714	5.66	571
	R/MH	10.0	12.00	120	12.00	120		R/MH	30.0	12.00	360	12.00	360
	R/H	0.0	18.00	0	18.00	0		R/H	6.5	18.00	117	18.00	117
	Total	207.0		1,270		1,088		Total	202.5		1,484		1,312
D	R/VL	0.0	1.00	0	1.00	0	K	R/VL	4.0	2.75	11	2.75	11
	R/L	68.0	4.50	306	4.05	275		R/L	66.0	4.50	297	4.05	267
	R/M	100.0	7.06	706	5.65	565		R/M	109.5	7.21	790	5.77	632
	R/MH	20.0	12.00	240	12.00	240		R/MH	10.0	12.00	120	12.00	120
	R/H	0.0	18.00	0	18.00	0		R/H	0.0	18.00	0	18.00	0
	Total	188.0		1,252		1,080		Total	189.5		1,218		1,030
E	R/VL	0.0	1.00	0	1.00	0	L	R/VL	0.0	1.00	0	1.00	0
	R/L	129.0	4.50	580	4.05	522		R/L	103.0	4.50	464	4.05	418
	R/M	82.0	6.95	570	5.56	456		R/M	116.5	6.91	805	5.53	644
	R/MH	19.0	12.00	228	12.00	228		R/MH	0.0	12.00	0	12.00	0
	R/H	0.0	18.00	0	18.00	0		R/H	0.0	18.00	0	18.00	0
	Total	230.0		1,378		1,206		Total	219.5		1,269		1,062
F	R/VL	0.0	1.00	0	1.00	0	Totals	R/VL	76.0	1.08	82	1.08	82
	R/L	121.0	4.36	527	3.92	474		R/L	1,088.5	4.49	4,882	4.04	4,394
	R/M	64.0	6.88	440	5.50	352		R/M	1,153.5	7.12	8,217	5.70	6,574
	R/MH	0.0	12.00	0	12.00	0		R/MH	164.0	12.00	1,968	12.00	1,968
	R/H	24.0	18.00	432	18.00	432		R/H	42.0	18.00	756	18.00	756
	Town Ctr.	-		200		200		Town Ctr.	-	18.00	200		200
	Total	209.0		1,599		1,458							
G	R/VL	0.0	1.00	0	1.00	0	Grand Total	2,524.0		16,105		13,974	
	R/L	86.0	4.51	388	4.06	349							
	R/M	98.0	7.06	692	5.65	554							
	R/MH	23.5	12.00	282	12.00	282							
	R/H	0.0	18.00	0	18.00	0							
	Total	207.5		1,362		1,185							

(1) Maximum or Minimum density for R/VL may exceed for fall below General Plan densities for certain neighborhoods because of existing residential development within these neighborhoods. For residential development on vacant parcels within R/VL area, the Minimum / Maximum density is 1.00 DU/AC.

(2) Maximum or minimum density requirements shall not apply to extra allowable units as described in the Affordable Housing Program, Section 3.9.3

Table 3.4: Implementing Zones for Master Plan Land Use Designations

Zones		RESIDENTIAL					COMMERCIAL					INDUSTRIAL		OPEN SPACE		PUBLIC		MIXED USE	
		R/VL Very Low Density	R/L Low Density	R/M Medium Density	R/MH Medium-High Density	R/H High Density	C/N Neighborhood	C/C Community	C/O Office	C/G General	C/FS Freeway Service	I/L Limited	I/G General	OS/RC Resource Conservation	OS/O Other Open Space	P Public (includes parks & schools)	M/X		
R-VL		X												X		X			
R-L			X											X		X			
R-M				X										X		X			
R-MH					X									X		X			
R-H						X								X		X			
C-L		X	X	X	X	X						X	X	X		X			
C-N							X							X		X			
C-C								X						X		X			
C-G									X					X		X			
C-O										X				X		X			
C-FS											X			X		X			
I-P												X		X		X			
I-L												X		X		X			
I-G													X	X		X			
A-G														X	X	X			
A-L														X		X			
A-U		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
P-F		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
PD		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
M-X																	X		

Definitions:

Unallocated Units. “Unallocated units” is the difference between the maximum number of units which could be built within a subdivision and the actual lesser number built. Maximum number of units is determined by multiplying the number of acres within the subdivision by land use district times the maximum density specified for each land use district within the neighborhood as shown on Table 3.3, and summing the result.

Excess Units. “Excess units” is ~~the difference between~~ the number of units proposed in a subdivision ~~and that exceeds~~ the number otherwise permitted by the maximum density by land use district for the subject neighborhood.

3.3.2 Permitted Uses

Table 3.4: Implementing Zones for Master Plan Land Use Designations identifies what zones may be used to implement the General Plan designations shown on the Mountain House Master Plan Map.

~~Table 3.5: Permitted Uses, identifies~~ The land uses which are allowed in the various zones ~~are specified in the Mountain House Development Title. The land use categories identified in Table 3.5: Permitted Uses~~ These uses are the only land uses permitted and/or conditionally permitted within Mountain House. ~~Definitions of these uses are found in the County Development Title.~~

3.3.3 Home Occupations

Objective: To encourage home occupations within Mountain House in order to minimize the need for automobile use, take advantage of emerging communication technologies and increase employment opportunities within the community.

Policies:

- a) Home occupations may include any occupation or business activity that is incidental to the residential use and is not a nuisance to the neighborhood.
- b) Home occupations shall adhere to the standards of the County Development Title, except as modified below.
- c) Home occupations shall be conducted indoors, within the residence or accessory structure of the principal practitioner.
- d) The use shall not exceed 400 square feet, and at least two-thirds of the residence must remain in residential use.
- e) No changes may be made to alter the residential character of the building.
- f) Any commercial vehicle shall be parked within the garage or carport of the residence.
- g) Work that produces noise, vibration, glare, fumes, odors, dust, or electrical interference is prohibited.

3.3.4 Second Units

Objective: To encourage second units in order to increase the diversity and affordability of housing opportunities for residents (see Sections 3.9.1 and 3.9.3: Definitions and Affordable Housing Plan, respectively).

Policies:

- a) Second units are small, self-contained living units which may be attached or detached from the primary residence.
- b) Second units shall conform to the requirements of the County Development Title, except as modified in the Master Plan.
- c) Design of second units shall reinforce the character of the neighborhoods targeted to include second units. Architectural treatments, scale and massing of second units shall be in keeping with the primary residence, and surrounding buildings. Design guidelines for second units shall be included in the Mountain House Design Manual.
- d) One off-street parking space shall be provided for the second unit, in addition to parking required for the primary residence.
- e) Second units may be served by a common driveway, a second driveway when located on corner lots, or from a rear alley providing such access is in keeping with the character of the neighborhood.
- f) Each residential subdivision within the R-VL, R-L and R-M land use district shall include 6.5% second units, unless the required units are provided elsewhere within the neighborhood.

Implementation:

- a) Tentative Maps. Tentative Maps shall identify the parcels or lots designated for second units.

3.3.5 Senior Housing

Objective: To encourage a variety of housing types and residential site locations suitable for senior citizens.

Policies:

- a) The Master Plan and Specific Plans shall provide for the housing needs of senior citizens, where such a need is identified.

Implementation:

- a) Master Plan Designated Senior Housing Sites. The R/H and R/MH sites indicated for Senior Housing by the Land Use Plan shall be developed primarily as Senior Housing, unless the need for such housing is determined not to exist during preparation of the Specific Plan for Neighborhood H.

- b) Additional Senior Housing Sites. Except for Specific Plan I, Specific Plans shall consider the need for additional senior housing sites, and shall designate sites where such a need is determined and a method to reserve the sites for seniors.

3.4 RESIDENTIAL OBJECTIVES AND POLICIES

3.4.1 Neighborhood Structure

Objective: To establish a neighborhood structure that permits easy access to schools, open space, commercial services, and transit.

Policies:

- a) Each of the 12 neighborhoods shall be sized to provide convenient walking access to the neighborhood facilities. The majority of residential units shall be located within one-half mile of a Neighborhood Center.
- b) Each neighborhood shall contain a Neighborhood Center which includes a K-8 school, a neighborhood park, and a neighborhood commercial area.
- c) The majority of neighborhoods shall be separated by Arterial streets with only Local or Collector streets occurring within the neighborhood. As much as possible, neighborhood boundaries shall also delineate the attendance boundaries of each K-8 school, thereby minimizing the need to cross Arterial streets to gain access to the school serving that neighborhood.
- d) Each neighborhood shall be sized to support K-8 school sizes between 750 and 870 students or a size determined by the school district.
- e) Each neighborhood shall include a mix of residential housing types, for residents with a variety of income levels, providing diversity and choice for residents (Figure 3.4: Neighborhood Structure).
- f) Higher density housing shall be concentrated within and near the Town Center, and near commercial centers, transit facilities, and open space amenities such as the Mountain House Creek corridor.
- g) Lower density housing shall be generally located near the western edge of the community closer to agricultural areas or in areas of existing residential development. It shall be located away from the Town Center, commercial uses and Central Parkway.
- h) Within neighborhoods, R/M uses shall generally be located nearest the Town Center, Central Parkway, and Village Commercial Centers, as applicable. Lower density R/L uses shall be located nearest the western community boundary, Old River and the golf course areas.
- i) The Master Plan Map combines Low Density Residential and Medium Density Residential (R/L, R/M) General Plan designations to allow for flexibility in the design of neighborhoods. These uses shall be delineated separately at the Specific Plan stage. Acreage allocations for R/L and R/M shall be as shown on Tables 3.1, 3.2, and Figures 3.5 to 3.8.

- j) Open space connections shall be provided from neighborhoods to community parks and other open space areas, such as Mountain House Creek linear park. These connections may consist of linear parks, multi-use paths, trails, local streets with sidewalks, or bikeways. All residential areas abutting Mountain House Creek Community Park shall provide convenient, frequent access to the park from adjacent streets.
- k) Bicycle and pedestrian access shall be provided between neighborhoods and community-wide destinations such as community shopping centers, schools, the Town Center, churches, golf courses, and the marina. These connections may consist of linear parks, multi-use paths, trails, local streets with sidewalks, or bike ways.
- l) Design of parks, roadways, commercial areas, residential neighborhoods and other uses planned for development prior to the Town Center shall consider the ultimate development of the Town Center as a primary concern and plan for access, orientation, site uses, landscape treatments and related issues accordingly.
- m) Public open spaces and uses shall front onto public streets to the greatest degree possible in order to give character and beauty to the street.
- n) K-8 schools shall have access provided by a Collector street and one or more Local streets, within the neighborhood. The entrances and building fronts shall be oriented onto Local and Collector streets to the degree feasible in order to maximize the civic presence of the school and add variety to residential streets. High schools shall have primary access provided by and be oriented toward Arterial streets.

Implementation:

- a) Neighborhood Relationship to Town Center. Specific Plans and subsequent development plans prepared prior to development of the Town Center shall carefully consider the ultimate buildout of the Town Center in the design of roadways and site plans.
- b) Combined R/L and R/M Designations. All areas designated with a combined R/L and R/M Master Plan designation shall be specifically zoned in a Specific Plan.
- c) ~~Existing Residential Development. Areas of existing residential development shall be zoned R-VL when public services become available.~~

3.4.2 Residential Site Planning and Design

Objective: To create attractive, identifiable neighborhoods and establish a local street network which facilitates easy access within neighborhoods and contributes to an attractive residential setting.

Policies:

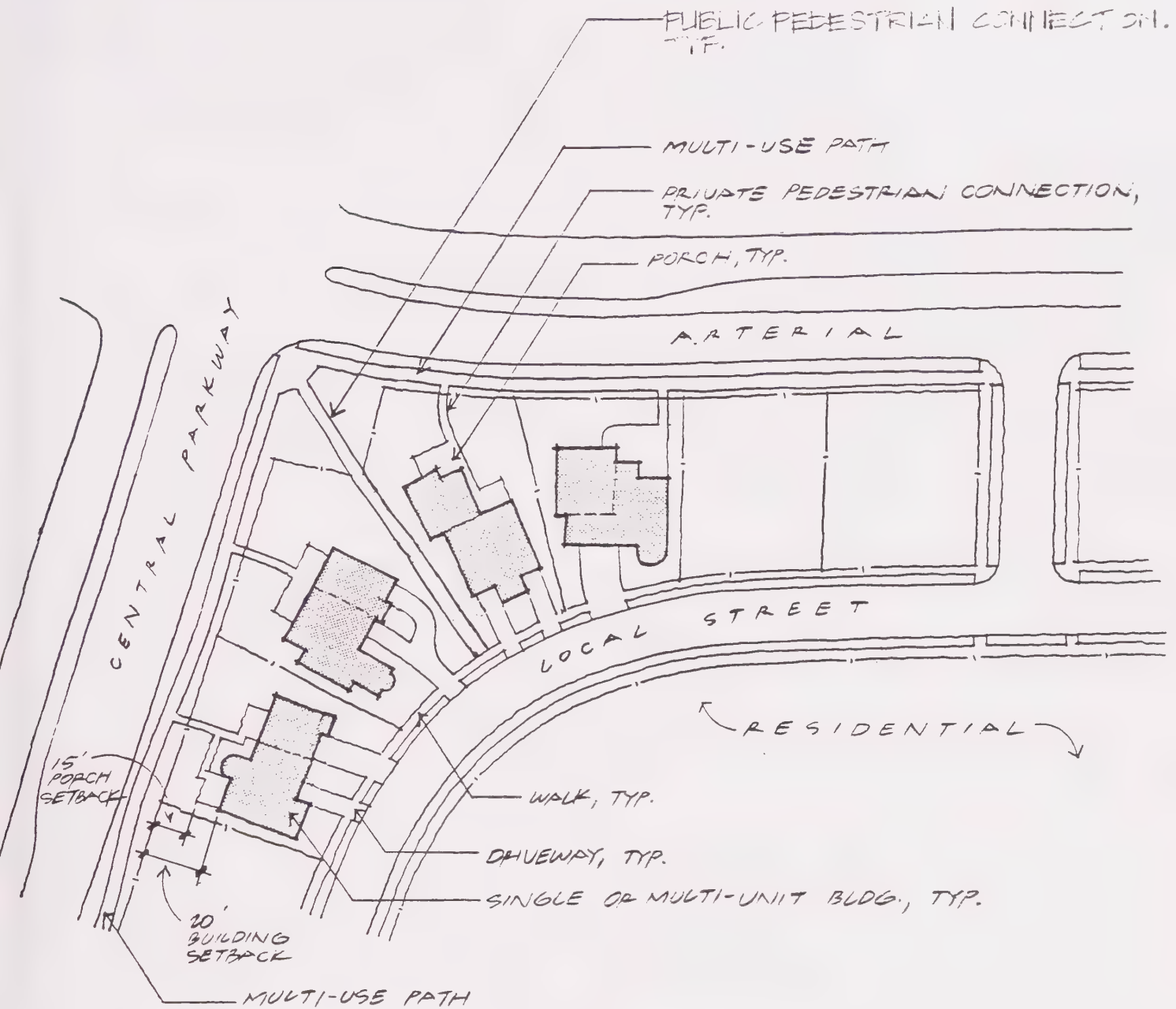
Residential Design

- a) Site designs shall create individualized expressions for each neighborhood and each major development within a neighborhood.

- b) Neighborhoods shall have a clear sense of entry, edges and center. This may be accomplished through the use of landscaping, streetscape design, wall treatments, decorative paving materials, monuments, or other appropriate elements.
- c) Multi-family development shall include a variety of housing types, such as duplexes, townhomes, condominiums, and apartments.
- d) The visual impact of driveways and garages shall be minimized by such techniques as minimizing the width of driveways; utilizing shared drives; using narrow drives with garages located at the rear of the lot; utilizing alleys; recessing the garage in the architectural design of the home; and maintaining the sidewalk as the consistent visual and functional element along the street.
- e) To the extent feasible, homes shall front onto Local and Collector streets. Creating long streets with only side yard frontage shall be avoided. Direct driveway access to individual homes shall be prohibited from major Arterial streets within 30 feet of entries to neighborhoods from Arterial streets.
- f) Homes shall front or give the appearance of fronting onto Central Parkway, with vehicular access provided from the rear alleys or streets. Fronting homes toward other Arterial streets, particularly Main Street and Mountain House Boulevard, is encouraged (see Figure 3.11: Residential Fronting Arterial Streets).
- g) Tentative Maps for individual parcels shall emphasize pedestrian and bicycle connections within the neighborhood, between adjacent residential areas and public facilities.
- h) Tentative Maps shall exhibit energy efficient, cost effective subdivision design; maximize access from housing to parks, greenbelts and other amenities; and discourage vehicular through-traffic.
- i) Multi-family housing along Mountain House Creek Linear Park shall be planned to maximize exposure to the park by orienting residential units, or outdoor activity areas adjacent to the creek corridor.
- j) Single family residential trash receptacles shall be screened by enclosures or landscaping and concealed from view. Trash receptacles for multi-family uses shall be fully enclosed, and screened from view. Enclosures shall be compatible with the building architecture and shall be constructed of masonry or other permanent materials. Gates shall be of solid construction, and entirely block views of the receptacle. All trash enclosures shall be landscaped with a combination of trees, shrubs and/or vines.

Roadway Design

- k) Local streets within neighborhoods shall be designed to disperse traffic and create a comfortable pedestrian scale. Either curvilinear or grid street patterns are acceptable within residential areas. See Chapter Nine: Transportation and Circulation for street standards.
- l) Pavement widths shall be minimized to the extent possible to reduce development and maintenance costs, to discourage speeding, and improve the visual appearance and scale of street corridors.



- m) Cul-de-sacs and Local streets shall be oriented to minimize travel distance to Neighborhood Centers for both pedestrians and automobiles. Pedestrian/bicycle connections shall be provided from Local streets and the ends of cul-de-sacs adjacent to Arterial streets and the Mountain House Creek Community Park, (see Figures 6.31 and 6.32 in Appendix 4-A: Mountain House Design Manual). ~~(See Figures 4.30 and 4.31, in Chapter Four: Development and Design).~~
- n) To the extent feasible, Local streets shall provide frontage on Mountain House Creek Community Park.
- o) Use of rear alleys is encouraged for homes along Collector streets, fronting neighborhood centers, pocket parks, or other important neighborhood streets.
- p) Where possible, shared access drives shall be utilized to reduce curb cuts and points of conflict along streets.
- q) In order to maximize interconnections between all areas within neighborhoods, street and block lengths shall be generally limited to 800 feet for all local streets. A minority of streets within a neighborhood may exceed this length, providing that through-block, pedestrian connections occur at distances no greater than every 500 feet.
- r) All streets, except very low capacity streets in limited areas, shall provide sidewalks on both sides. Sidewalks on one side may be allowed on cul-de-sacs of 500 feet or shorter in length or where special site conditions apply. All sidewalks within public rights of way shall meet the minimum standards of the Americans with Disabilities Act (ADA).
- s) Street corner radii shall be as small as feasible to minimize pedestrian crossing distances (see Chapter Nine).

Implementation:

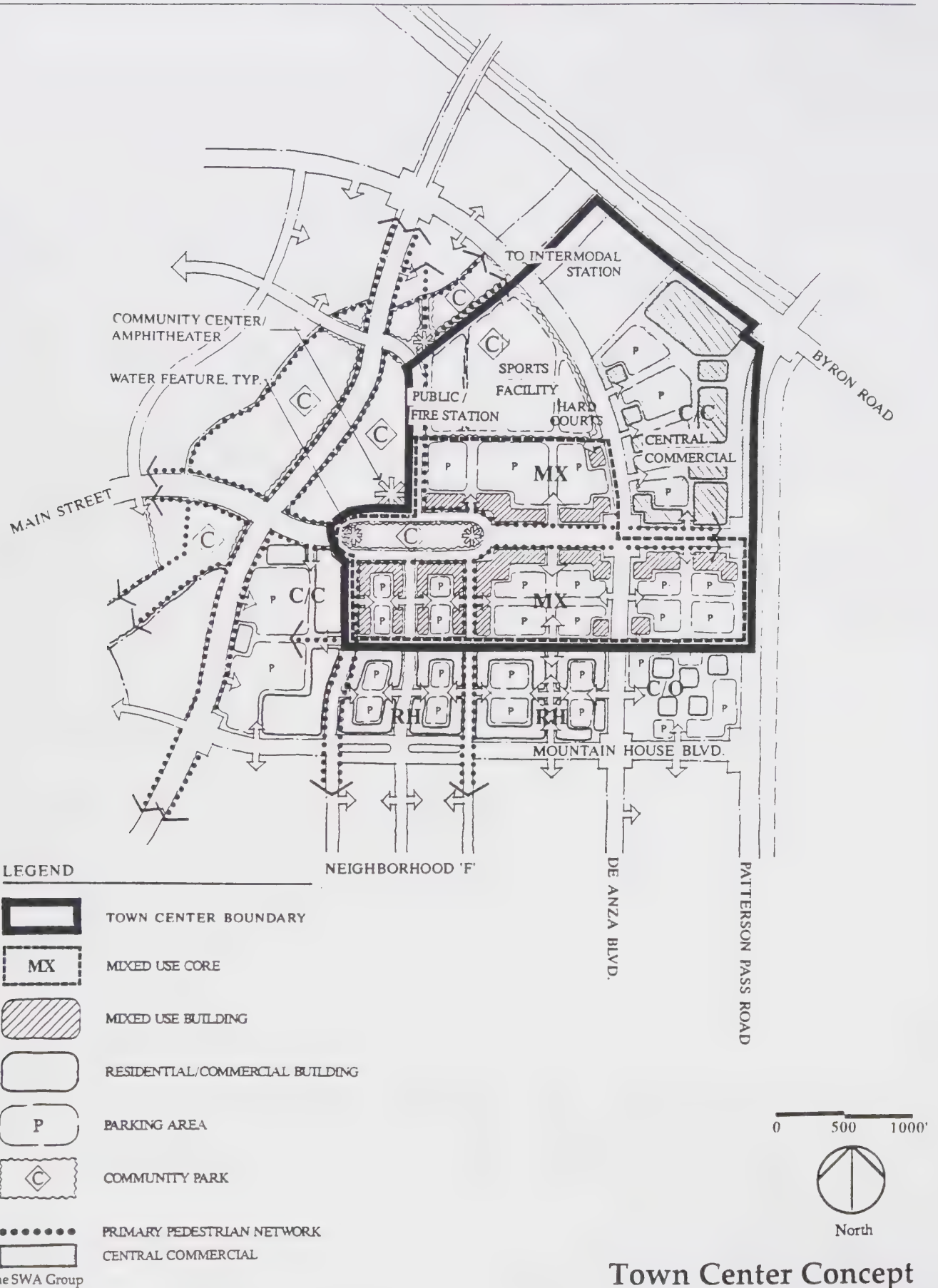
- a) Conceptual Residential Layouts. Specific Plans for residential areas shall include conceptual layouts for all roadways and for the school sites, parks, commercial areas and other uses within the neighborhoods.
- b) Roadway Layout. Tentative maps for residential areas shall provide detailed layouts for all roadways.

3.5 TOWN CENTER OBJECTIVES AND POLICIES

Objective: To provide a Town Center which will serve as an active, mixed use "downtown" and create a sense of focus for the Mountain House community.

Policies:

- a) The Town Center shall contain and allow a wide range of uses that will complement one another and provide for the diverse needs of residents. The Town Center shall provide the principal opportunities for specialty shopping, entertainment, office, and civic functions, all located in close proximity within a pedestrian-scaled urban setting (see Figure 3.12: Town Center Concept).
- b) The Town Center shall provide a location for higher intensity land uses and job generation than other areas of Mountain House.
- c) The core of the Town Center shall focus on a central open space element located on Main Street. This park area is intended to function as the formal "town green" with primary retail and other uses fronting the sidewalks bordering the area. The town green shall be designed as an appealing urban pedestrian space providing convenient pedestrian circulation between portions of the Town Center, comfortable seating areas that are protected from the sun and other pedestrian amenities such as small plazas, gathering places and fountains. The open space may occur as a large esplanade within Main Street if the area is large enough to provide a usable park environment (Figure 9.14: Main Street -DeAnza to Central Parkway).
- d) The Town Center shall be pedestrian in scale with tree shaded streets and buildings oriented to the street with generally little or no setback from the sidewalk.
- e) Parking shall be provided on all streets within the Town Center, with additional off-street parking provided at the rear of the buildings, in interiors of blocks, beneath buildings or in parking structures.
- f) The Town Center shall be surrounded by Major and/or Minor Arterial streets. Central Parkway will function as a pedestrian, automobile and transit north-south corridor that connects the majority of the neighborhoods with the Town Center. Street layouts and pedestrian/bicycle systems in neighborhoods surrounding the Town Center shall be oriented to facilitate access to the Town Center.
- g) Transit facilities shall be provided within the Town Center, including bus stops and shelters, and provision of transit information.
- h) The Mountain House Creek pedestrian corridor shall connect to the Town Center via Main Street and public park areas.
- i) The Town Center shall exhibit a consistent character throughout the district which will be defined by architecture, landscape, signage, land use, land intensity, and development standards. Design of the area should create an area conducive to community activities, with a festive and colorful atmosphere. Design of buildings and outdoor spaces shall utilize color, special materials, signage, furnishings and landscaping to promote the area as the active "heart" of the new community.
- j) High Density housing shall be a significant component of the Town Center.



Implementation:

- a) Town Center Specific Plan. One Specific Plan shall be prepared and approved for the entire Town Center prior to the establishment of any permanent use within the boundaries of the Town Center. The Specific Plan for the Town Center may be initiated by the County, CSD, or property owner. The Town Center Specific Plan shall include the following areas: the mixed use portion with the open space core, the Central Community Commercial, and the area north to Mountain House Creek, planned predominantly for open space and public uses. No development of this area shall occur without it being addressed in the Specific plan. Phased development within the Specific Plan area may necessitate modification of the Specific Plan through subsequent plan amendments.
- b) Mixed Use Area. The mixed use area within Town Center shall be implemented through the County's Mixed Use zone as defined by the County's Development Title.

3.6 COMMERCIAL OBJECTIVES AND POLICIES

3.6.1 General Issues

Objective: To establish a variety of commercial areas with a full range of commercial uses, thereby minimizing the need for shopping trips outside the community and providing neighborhood and community gathering places.

Policies:

- a) Commercial uses within Mountain House shall include neighborhood shopping, community retail centers, freeway-oriented retail, and specialty shopping in the mixed use Town Center (see Section 3.3: Land Use Regulations and Permitted Uses).
- b) Commercial uses shall provide easy pedestrian access via sidewalks and transit to adjacent residential, civic, open space, or commercial/industrial uses.
- c) Commercial uses shall be oriented toward and be accessible from streets, public spaces and parking areas.
- d) Commercial uses shall be designed as active, colorful, pedestrian friendly focal areas within the community.
- e) Shared parking areas and shared access drives shall be incorporated into the design of commercial centers to reduce curb cuts and points of conflict along streets. Shared parking may be allowed with non-commercial uses such as churches, parks and recreation facilities.
- f) All parking areas shall be screened from view from public rights of way with low berms or hedges. Such screening shall not exceed 36 inches in height, and is intended to minimize the views of cars and parking areas.
- g) All commercial areas shall be served by transit.

Implementation:

- a) ~~Specific Plan I Commercial. The first Specific Plan shall designate an accessible and appropriate location for a commercial area that will provide a grocery store for the first phases of development.~~
- a) Interim Commercial Services. No later than the issuance of the 500th dwelling unit permit, a small temporary commercial facility shall be provided offering basic convenience items to Mountain House residents. Such facility may be in conjunction with a sales center, either as a separate, relocatable building or room within the sales offices.
- b) Convenience Retail Services. No later than the issuance of the 1,000th dwelling unit permit, a permanent neighborhood commercial facility offering convenience items to Mountain House residents shall be established. If such a facility has not already been established by a private convenience store operator, a sufficient inducement shall be provided to cause the establishment of a store. This inducement may be a reduced land price, joint venture, build-to-suit with reduced rent or such other financial approach that would cause a facility to commence operation.

3.6.2 Neighborhood Commercial

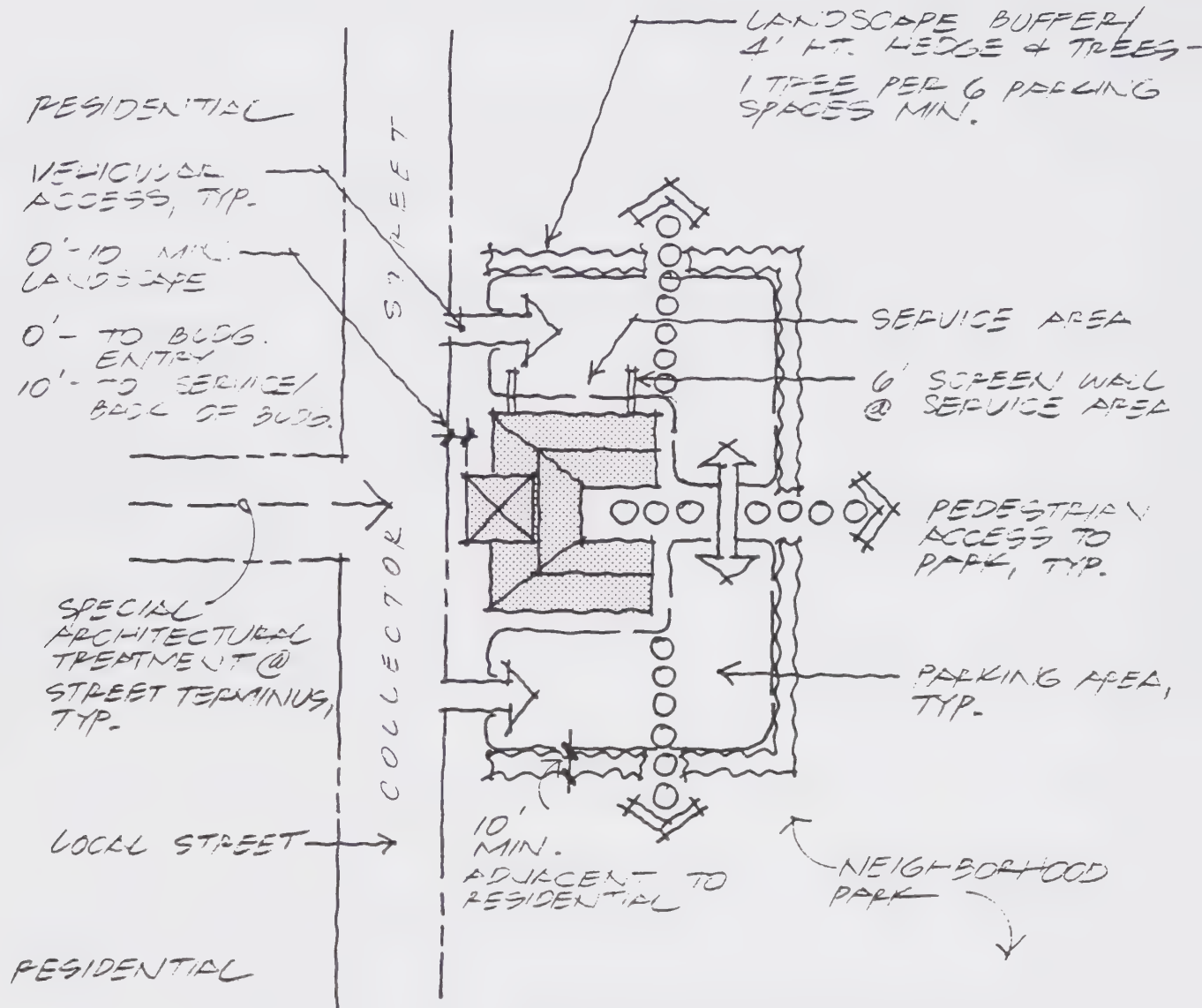
Objective: To provide Neighborhood Commercial uses within each of the 12 residential neighborhoods with the uses accessible by foot or bicycle and clustered to contribute to a neighborhood focus.

Policies:

- a) A one and one-half acre site shall be located within each of the 12 neighborhoods, generally near the neighborhood park and school to serve local, pedestrian-oriented shopping needs within the neighborhood and to help to offset the need for longer vehicular trips to community or regional commercial areas (see Figure 3.13: Neighborhood Commercial Concept).
- b) Where sites are located near a K-8 school site, access to retail facilities shall be located away from school and school yard entrances.
- c) Neighborhood Commercial sites shall be located on a Collector roadway.
- d) Neighborhood Commercial sites shall be designed to accommodate a small retail center and may provide space for a community facility such as a day care center, church, recreation building, or meeting hall, if such community uses cannot be provided within the neighborhood school or park. Sites may be enlarged up to three acres subject to the need for additional services or facilities within the neighborhood.
- e) The design and character of Neighborhood Commercial facilities shall be compatible with and reinforce the character of the school and residential uses. Pedestrian uses such as outdoor eating areas or other such areas are encouraged.

Implementation:

- a) Neighborhood Commercial Site Concept. Each Specific Plan shall include the location and conceptual site plan for each Neighborhood Commercial site.
- b) Special Purpose Plan. In conjunction with the school plan for the neighborhood K-8 school, a Special Purpose Plan for Neighborhood Center shall be prepared and approved by the review authority before the submittal of the First Development Permit for the neighborhood (see Chapter Seventeen: Implementation for requirements applicable to focus areas). The Plan may result in a deviation in acreage for each neighborhood center and a modification of the locations of the school, park, and commercial uses.



NOTE: ON NEIGHBORHOOD COMMERCIAL BLDG. FRONTING STREET, PARKING SCREENED BEHIND BLDG. OR TO SIDE OF BLDG. IS PREFERRED.

3.6.3 Community Commercial

Objective: To establish three community commercial "village" shopping centers of 15-20-acres each (Village Centers), located and configured to provide multiple neighborhoods with daily and weekly shopping needs.

Objective: To establish a community commercial shopping center ("Central Commercial Center") to provide the entire community's major shopping needs.

Policies:

- a) Community Commercial uses shall be located along Arterial roadways, and should be directly accessible by adjacent residential areas along Local or Collector streets.
- b) Transit stops, park-and-ride facilities, and ample pedestrian walkways shall be conveniently located in Village Centers and the Central Commercial Center.
- c) Building materials should project an image of substance and durability. Materials which are texturally rich should be used at the street level where pedestrians are in closest contact with the buildings.
- d) Service stations and other "pad" uses including parking areas, shall be carefully designed to not visually dominate the street or intersection. Pad uses shall be designed as a secondary, supporting element within Community Commercial areas, utilizing the same architectural style.
- e) Colonnades, or recessed walkways shall be used for all buildings orienting toward parking areas. Colonnades are discouraged for street-oriented storefronts.
- f) Awnings, canopies, trellises or other elements are encouraged.
- g) Uses within each Community Commercial area shall utilize shared parking areas and access drives to the degree possible.
- h) Service, mechanical, trash storage and loading areas shall be located away from public streets or use areas, and screened from view.
- i) A single, centralized recycling collection site shall be designated in each of the three Village Centers.
- j) Three Village Centers shall be located to evenly serve the 12 residential neighborhoods, each Center serving approximately 5,000 homes. Each is intended to include a major anchor grocery store, drugstore and supporting small stores to support approximately one-third of the community's population. Other uses may include services, offices and recreation uses.
- k) Village Centers shall be easily accessible from surrounding neighborhoods by pedestrians and bicycles, and shall incorporate the following elements, to the extent feasible:
 - Pedestrian walkways through parking areas,
 - Direct connections of pedestrian walks from storefronts to adjacent streets

- Pedestrian “breezeways” or access streets connecting through or between buildings to residential areas adjacent to the Village Center site,
 - Direct pedestrian access from transit stops to storefronts
 - Storefronts of buildings facing surrounding streets.
- l) Village Centers shall be designed to be compatible with surrounding neighborhoods and should help to establish an attractive community identity.
- m) Courtyards and outdoor seating and gathering areas shall be incorporated into the Village Center sites.
- n) The Village Center adjacent to Town Center on Central Parkway shall provide pedestrian and vehicular connections to adjacent, future Town Center uses. Uses adjacent to Main Street shall orient storefronts toward the street, and should be designed as an extension of the street-oriented uses anticipated for Town Center.
- o) Mountain House shall include one community-serving shopping center (Central Commercial) which is intended to include such retailers as junior department stores and community-wide recreation facilities. This center will provide an additional major shopping area for the entire community, offering a wider range of products and services than the other Village Centers.
- p) The Central Community Commercial Center shall be located within the Town Center and shall provide direct pedestrian access to the mixed use area and other uses within the Town Center.

Implementation:

- a) Design for Transit Use. Designs for all Community Commercial areas prepared as part of subsequent submittals shall be oriented to transit use and shall incorporate such features as buildings and shelters near the street front for bus and other vehicle connections, adequate and accessible transit shelters and park-and-ride facilities, and ample pedestrian connections from transit stops to stores and services.
- b) Special Purpose Plans. Prior to the approval of the first Development Permit that includes a Village Center or the Central Commercial area, a Special Purpose Plan for the entire commercial area shall be approved (see Chapter Seventeen: Implementation for requirements applicable to focus areas).

3.6.4 General Commercial

Objective: To provide General Commercial areas in appropriate locations to serve the community’s needs. General Commercial uses are intended to provide for specialized commercial establishments such as, home supplies, building supplies or other establishments that generally require special purpose trips rather than providing daily shopping needs.

Policies:

- a) General Commercial areas shall be located on Arterial roads and near major intersections or interchanges to provide efficient access and minimize disturbance to residential areas.

- b) General Commercial uses adjacent to the Alameda County line shall be compatible with agricultural uses, or provide suitable buffers (see Section 4.3: Community Edges).

3.6.5 Freeway Service Commercial

Freeway Service Commercial uses are intended to provide for specialized commercial establishments such as automobile service stations, restaurants, hotels and motels, and limited retail uses serving freeway travelers and the business park. Figure 3.14: Commercial/Freeway Service Concept provides a conceptual site plan for this area.

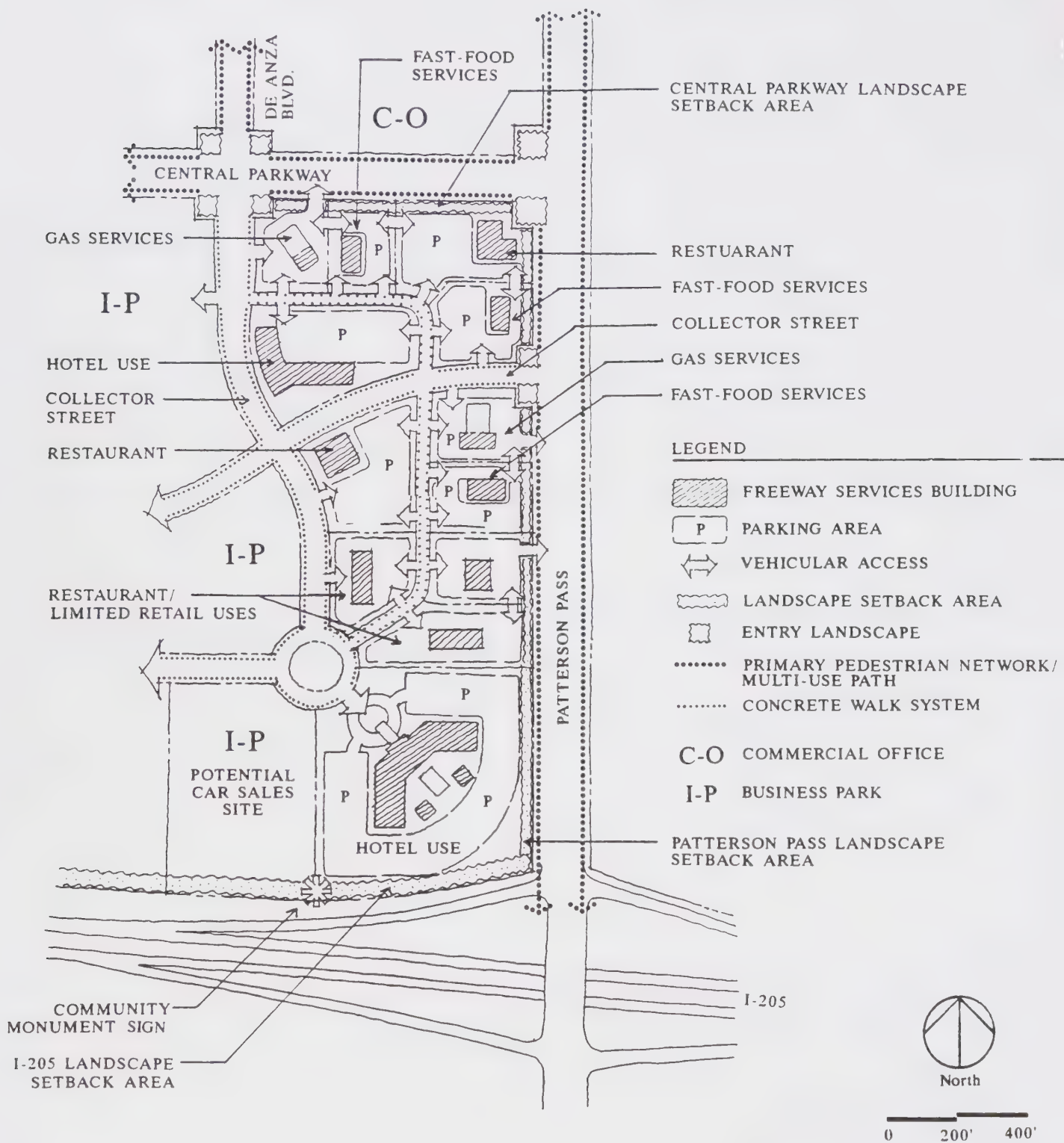
Objective: To provide a Freeway Service Commercial area near Interstate 205 to serve the freeway traveler's and community's needs.

Policies:

- a) Freeway Service Commercial uses shall be located along Patterson Pass Road, between the Central Parkway intersection and the I-205 interchange.
- b) Primary access to uses within the C/FS area shall be from internal Collector or local streets.
- c) Development of sites within the C/FS area shall be compatible with the Business Park.

Implementation:

- a) Conceptual Site Plan. Each Specific Plan containing Freeway Service Commercial uses shall include a site development concept for the entire C/FS zone indicating circulation, access, building areas, common landscape setbacks and conceptual uses.
- b) Special Purpose Plan. Prior to the approval of the first Development Permit that includes C/FS uses, a Special Purpose Plan for the entire freeway commercial shall be approved (see Chapter Seventeen: Implementation for requirements applicable to focus areas).



Commercial/Freeway Service Concept

Source: The SWA Group

September 16, 1994

Chapter Three: Land Use

3.7 INDUSTRIAL AND OFFICE USE POLICIES

Objective: To support the development of offices and a range of industrial uses within Mountain House by providing appropriate and attractive locations for such businesses.

Policies:

- a) Office Commercial areas near the Town Center shall reinforce the higher intensity character of the Town Center, and shall provide convenient pedestrian connections between the two areas.
- b) Office Commercial uses shall provide locations for a wide variety of public and private office uses, including medical offices, library, civic center, fire stations, police station, communication centers, and business offices.
- c) The Office Commercial site at Central Parkway and Grant Line Road shall be designed to complement the adjacent Village Center and multi-family housing areas.
- d) Major office and civic uses should be located in proximity to the Town Center and the Patterson Pass Road employment corridor.
- e) The configuration of office and industrial areas shall provide for flexible parcelization, good access, and visibility.
- f) Industrial and office sites should be incorporated into campus-like settings, emphasizing the common treatment of open space, amenities, circulation or other common elements.
- g) Office and industrial uses should reflect a commonality of architectural elements within each identifiable area. In general, building architecture should reinforce the character of important civic and commercial areas through a consistency and compatibility of architectural style. Furnishings such as signs, walls, fences, lights and benches should be designed to reinforce these architectural complexes.
- h) Industrial and office sites shall be located along Arterial roadways in the eastern portion of the community in order to provide efficient access and effectively define the eastern boundary of the community.
- i) Industrial and office sites shall be designed to facilitate easy vehicular, transit, bicycle and pedestrian connections between use areas and individual properties and users. This may be accomplished through shared driveway access, pathway and open space systems, shared parking and locations of transit stops or other facilities.
- j) To the extent possible, office and industrial buildings shall be oriented to the street with parking and/or loading areas behind or to the sides of the building. Service, loading, storage or other potential nuisance areas shall be located to minimize impacts on adjacent uses.
- k) Industrial and office areas may incorporate commercial support facilities as defined in the Mountain House Development Title Table 3-5 in order to reduce the need for lengthy automobile trips during the work day.
- l) Industrial and office areas shall provide facilities for bicycle commuters including bicycle storage and showers (see Chapter Nine, Section 9.8: Bicycle and Pedestrian Facilities).

- m) Industrial areas may accommodate larger recreational facilities such as ~~theaters~~, bowling alleys, and ice rinks.
- n) Primary access to industrial sites in the Patterson Pass Business Park and the Old River Industrial Park shall be from the internal, Collector street system. Primary access to industrial and commercial sites adjacent to Patterson Pass Road shall be from De Anza Boulevard and internal Collector streets.
- o) Where appropriate, sites shall provide walks within the site connecting building entries to the street sidewalk network and transit facilities.
- p) General Industrial areas shall be provided for building contractors, yard storage, building material suppliers and similar businesses with very low density employment. General Industrial areas shall be separated from residential or other sensitive land uses by non-sensitive land uses or other appropriate buffers.
- q) Industrial sites shall incorporate courtyards, patios, plazas, picnic areas, or other employee use areas and facilities. Individual site, or common fitness and recreation facilities are encouraged.
- r) Office, industrial or other commercial buildings shall generally have primary facades which face toward public streets, and be designed to enhance public access and perception of such buildings. All sides of buildings visible to the public shall be detailed as active, interesting facades or screened by landscaping. Service areas and facades not visible to the public may be simpler in treatment.
- s) All commercial and industrial sites shall utilize shared parking and drives to the extent possible, and shall provide driveway connections between adjacent parcels.
- t) Businesses providing primarily warehousing or distribution functions shall not be allowed within the Industrial Park and Limited Industrial zones, unless expressly permitted by the County.
- u) In accordance with the provisions of Section 3.9: Jobs/Housing & Affordable Housing, the types of permitted Industrial uses shall be expected to provide the minimum jobs per acre shown by Table 3.1: Land Use Program.
- v) General landscaping and development guidelines shall be addressed by the Mountain House Design Manual. Additional, more detailed guidelines or standards, if required, shall be established by CC&R's.
- w) Detailed CC&R's shall be prepared for all Industrial uses prior to approval of Tentative Parcel Maps or other improvement plans for the area.
- x) All industrial areas located south of Byron Road shall be zoned I-P by Specific Plans.

3.8 PUBLIC AND INSTITUTIONAL USE POLICIES

Objective: To provide appropriate and accessible locations for public and institutional uses within Mountain House.

Policies:

- a) Public safety facilities such as fire and police stations shall be located in or near commercial areas or adjacent to public parks.
- b) Institutional uses such as private schools may be sited in commercial, residential or public areas adjacent to Arterial or Collector roads.
- c) Civic and community buildings shall generally have primary facades which "front" public streets and spaces, and the design of such facilities shall enhance public access and perception of such buildings.
- d) Public-serving uses such as administrative and civic buildings shall be concentrated within or near the Town Center.
- e) ~~The transit center property is designated for public use and is intended to be an~~ intermodal facility ~~north of Byron Road shall serve~~ serving as a transfer point between automobiles, buses and rail vehicles. In its initial stages the transit center shall provide transit information, parking, and waiting areas.
- f) Schools: See Chapter Five: Education and Child Care.
- g) Temporary Transfer Station in Town Center: See Chapter Nine: Circulation and Transportation.

Implementation:

- a) Major Impact Facilities. Major Impact Facilities, including the water and sewer treatment plants, will require a Use Permit.
- b) Essential Public Services. Police stations, fire stations and libraries will require a-site discretionary approvals.
- c) Recreation. Parks or other recreation facilities will require a site approval.

3.9 JOBS/HOUSING & AFFORDABLE HOUSING

As stated earlier in Chapter Two, a primary goal of the Mountain House land use plan is to establish a close balance between employment and housing. This means providing sufficient non-residential land uses so that jobs are created for every resident in the community who plans to work, and providing housing that is affordable to those working residents as well. This Master Plan is intended to allow those who work in the community to have the opportunity to live there and those who live in the community to have the opportunity to work there.

This section is comprised of two distinct but interrelated programs: 1) the jobs/housing program, crafted to ensure that jobs are available to working residents of the community; and 2) the affordable housing program, designed to ensure that homes are available and affordable to employees within the community.

The following appendices accompany this section: Appendix 3-A: Job Creation Program; and Appendix 3-B: Distribution of Housing and Affordable Housing Program.

3.9.1 Definitions and Assumptions

Definitions

Affordable Housing Fee: “Affordable Housing Fee” means the fee assessed against all residential development in Mountain House, except extra allowable units, which is used to generate revenues for the Mountain House Trust Fund is a measure of how well the planned housing meets the assumed

Affordability Index: “Affordability Index” means the measure of how well the planned housing meets the assumed needs of those employed in the community, expressed as the ratio of planned housing to required housing at each household income level. The projected affordability indices at project buildout are shown in Table 3.9: Summary of Affordability Analysis. The affordability index is discussed further in Appendix 3-B: Distribution of Housing and Affordable Housing Program.

Area Median Income (AMI): “Area Median Income” means the estimated 1993 San Joaquin County median household income of \$38,200. Further discussion of AMI is provided in Appendix 3-B.

Best Case Ratios: “Best Case Ratios” means the projected improvements in the Jobs / Housing ratios from the end of the first Specific Plan to project buildout. These “Best Case” jobs/housing ratios are presented in Table 3.6: Analysis of Jobs/Housing Balance Over Time.

Extra Allowable Units: “Extra Allowable Units” means ~~the additional second unit dwellings and~~ residential units permitted and encouraged in the town center and R/H areas, which provide affordable housing for low income and very low income households, plus the other second unit dwellings permitted and encouraged in all neighborhoods of the community, that are included in Planned Units but excluded in calculations relative to neighborhood minimum and maximum densities and General Plan Densities.

Jobs/Housing Ratio: “Jobs / Housing Ratio” means the ratio of required housing to available housing, where available housing is defined as the number of units built.

Minimum Ratios: “Minimum Ratios” means the ratio of required housing to available housing, where required housing in a given year is compared to available housing three years earlier.

Mountain House Housing Trust Fund “Mountain House Housing Trust Fund” means the mechanism created to apply fee revenues to the affordable housing needs in Mountain House. The details of the Mountain House Housing Trust Fund are discussed in Appendix 3-B.

Planned Housing “Planned Housing” means the 16,105 primary residential units planned for the Community plus Extra Allowable Units, consisting of 214 second units and 429 R/H units that are proposed specifically to help meet the needs of very low income households, plus 643 other second units. Total planned housing, estimated to be 17,391 units, is shown on Table 3.9: Summary of Affordability Analysis. For more details, refer to Appendix 3-B.

Population-Serving Jobs: Population-Serving Jobs” means jobs that will be generated simply because the residential population demands certain services, estimated at 52% of all permanent jobs created in the community.

Project Buildout means buildout of all planned housing units, all commercial/industrial areas, and all public facilities.

Regional Jobs: “Regional Jobs” means jobs that provide products or services to regional or worldwide populations, estimated at less than half of the permanent jobs created in Mountain House. Refer to Appendix 3-A for additional information regarding the breakdown of jobs in the community.

Required Housing: “Required Housing” means the number of housing units necessary to meet the needs of employees who fill permanent positions in the community, expressed as: $(\# \text{ of jobs} + \# \text{ of employed residents per household}) \times (1 + \text{vacancy rate})$.

Second Units: “Second Units” mean self-contained living units either attached to or detached from the primary residence on a single lot, including accessory apartments or “granny flats”. Appendix 3-B discusses this in more detail.

Household income categories used in the affordable housing program are defined as follows.

- Very Low Income (approximately 50% of AMI or less [as defined in Section 50105 of the Health and Safety Code])
- Low Income (approximately 50%-80% of AMI [as defined in Section 50079.5 of the Health and Safety Code])
- Moderate Income (approximately 80%-120% of AMI [as defined in Section 50093 of the Health and Safety Code])

Appendix 3-B provides additional information regarding household income categories.

Assumptions

- a) Employed Residents per Household: 1.44 employed residents (full-time equivalents) per household are assumed. This figure was derived using regression analysis that considers the geographic relation ship between Pleasanton, Livermore,

Tracy, and Manteca and the number of employed residents per household in each community. This value is assumed to be constant throughout project development.

- b) Vacancy Rate: An overall vacancy rate for residential units in the community is assumed to be 5%.
- c) Residential Absorption: A projected-growth scenario assuming an average annual absorption of 800 units has been used for purposes of the jobs/housing analysis. Regardless of the absorption rate during the community's development, Mountain House is expected to achieve a 0.99 jobs/housing balance at buildout.
- d) Non-Residential Absorption: The absorption of certain non-residential land uses (e.g., neighborhood commercial, community commercial, public uses such as schools and parks) relates directly to the residential absorption due to the demand for basic retail goods and services by residents in the community (see Public Financing Plan). These land uses follow residential absorption with a short lag. Other non-residential land uses (e.g., General Commercial, Industrial) are assumed to be absorbed after a sufficient employment base exists in the community and after maturing of the job creation program (discussed as part of the Jobs/Housing Program following).

Jobs have been assumed to follow housing by an average delay of three years. Under a projected-growth scenario, an average of 55 acres per year is absorbed—excluding the two golf courses and one marina. The 55 acres consists of 30 acres of commercial and industrial uses and 25 acres for schools and other public uses.

- e) Average Minimum Household Income: An average household with 1.44 persons working full-time (or the equivalent) at minimum wage has a minimum income of \$12,730.
- f) Distribution of Household Incomes: Household incomes in Mountain House have been derived and distributed among 17 income ranges using regression analysis that considers the geographic relationship between Pleasanton, Livermore, Tracy, and Manteca. The Mountain House incomes were then adjusted to exclude from the analysis the poverty-level households in the existing cities because the stated objective of the affordable housing program is to provide housing that is affordable to employees in Mountain House. The adjusted distribution results in 15 income ranges with the lowest average minimum household income being \$12,730. The distribution also results in a median household income in Mountain House of approximately \$47,900, which falls between the median household incomes of Livermore and Tracy, the two cities directly to the west and east, respectively, of Mountain House.
- g) Affordability: The 15 income ranges have been converted to income levels, where an income level reflects the midpoint of an income range. It is assumed that an affordable level of housing costs is 30% of household income. Table 3.9: Summary of Affordability Analysis presents the affordable monthly rent and affordable home price for each income level. Refer to Appendix 3-B for additional information regarding affordability levels.
- h) Extra Allowable Units: Although Extra Allowable Units have not been directly considered in the overall Master Plan and mitigation programs, it is assumed that the impacts associated with their construction are accounted for by the 5% residential vacancy. The 5% vacancy reduces impacts associated with schools,

water and sewer facilities, transportation, and other capital facilities and services. These reduced impacts, which also have not been considered in the overall Master Plan and mitigation programs, are a function of the residential densities. In other words, a low density unit generates more students, more water/sewer usage, more trips, etc., than a high density unit. Consequently, additional R/H units and second units will generate less impact on an average per-unit basis than the impact reduced by a 5% vacancy across all residential land uses.

The purpose of incorporating the extra allowable units into the community is to meet the needs of lower income households without increasing impacts on facilities and services that would exceed the impacts reduced by the 5% vacancy. The increased impacts generated by the additional units have been calculated and do not exceed the impacts reduced by the 5% vacancy.

- i) Affordability of Second Unit Dwellings: It is assumed that one quarter of the 857 planned second unit dwellings (214 units) will be available for lease, while the remaining number of units (643) will be occupied by family members. Based on their limited size, relative lack of amenities, low construction cost, and other factors, comparable rents indicate that the 214 available second unit dwellings will be affordable to very low income households.
- j) Affordability of Units for Other Low Income Households: It is assumed that market forces, independent of housing subsidies from the MHHTF or from other sources, will result in housing that is affordable to other low income households (i.e., those earning between 50% and 80% of median income, or approximately \$20,000 to \$30,000), based on the distribution of household incomes in Mountain House derived as part of the affordable housing analysis and based on comparable rents for similarly-sized units.

3.9.2 Jobs/Housing Program

The focus of the jobs/housing program is the numerical balance within the community between jobs and housing over time. Issues of affordability are addressed in the affordable housing program below and in Appendix 3-B.

Based on the land use design and job development programs, Mountain House will strive to achieve a jobs/housing goal of 0.99 by project buildout. This ratio could be higher if, for example, the actual number of employees per acre or the final Floor Area Ratio for a given land use is slightly higher than the low numbers currently assumed.

Although the jobs/housing program is intended to be market-driven rather than agency-controlled, it contains quantifiable goals over time that will be reviewed as part of the County's on-going monitoring program. The Board of Supervisors will, at each review, decide whether the community is achieving those goals and what to do if it is not.

As non-residential buildings are completed and occupied, permanent employment opportunities are created. During the construction phases, though, all development in Mountain House will create employment in a variety of specialized jobs that are not considered permanent in the traditional sense. These direct construction and other related jobs have not been included in the analysis of the jobs/housing balance. However, given the long-term nature of the project, some portion of these employees will choose to reside in the Mountain House community, thereby bringing jobs and housing closer in balance, especially in the earlier years of project development.

As Table 3.8: Impact of Residential and Commercial/Industrial Direct Construction Jobs illustrates, the Best Case jobs/housing ratio rises above 1.0 in every year of residential absorption if direct construction jobs are factored into the ratio. An increase of approximately 2,000 direct construction jobs per year over a period of 20 to 25 years is a long-term, if not "permanent," beneficial economic impact. Therefore, direct construction jobs generated solely to support the buildout of Mountain House may be considered as part of the annual program monitoring the community's jobs/housing balance.

Job development is also an important element of the jobs/housing balance. Population-serving jobs represent approximately half of all permanent jobs created and will not be the primary target of the job creation program. It is assumed that, as the project establishes some momentum and realizes a critical mass of all types of employers, the success of the job creation program targeting employers with regional jobs should gradually improve. In addition, it may take employers three years on average to capitalize on the employment base created by residents in the new housing. Therefore, as used below, the "Minimum" jobs/housing ratio is the ratio of required housing to available housing, where required housing in a given year is compared to available housing three years earlier (see Table 3.5: Jobs/Housing Analysis).

Many communities do not want a jobs/housing balance. Instead, by land use policy or by regulation, they either try to discourage employment or try to encourage employment without corresponding residential development. The land use plans and regulations for Mountain House have been developed to support job creation, balanced with the planned housing. To reflect the importance of this planning, Table 3.7: Analysis of Various Jobs/Housing Scenarios Over Time shows the best case and the minimum jobs/housing ratios as being close together.

Objective: To ensure that jobs and a corresponding amount of affordable housing are available to working residents in Mountain House, with a jobs/housing ratio of 0.99.

Policies:

- a) Programs shall be instituted to attract and develop jobs in the community.
- b) The jobs/housing goal of 0.99 shall be the target at buildout of Mountain House.
- c) Job development activities shall target specific types of industry that tend to offer higher salaries, including:
 - biomedical, biotech, bioengineering
 - professional health care services
 - high-tech (i.e., chip manufacturing, software development)
 - voice and data communication hardware and services
 - financial services, real estate, accounting and legal services
- d) Non-residential land uses shall generally conform to the minimum job densities presented in Table 3.1: Land Use Program (see Section 3.7, Industrial and Office Use Policies).
- e) Land use allocations and regulatory controls shall support a jobs/housing balance and land use changes or regulatory changes will not be made without giving consideration to the effects on a jobs/housing balance.

Table 3.5

MOUNTAIN HOUSE JOBS/HOUSING ANALYSIS
ANALYSIS OF GEOGRAPHIC RELATIONSHIPS WITH MOUNTAIN HOUSE

"Altamont Pass Corridor"

West to East from Pleasanton to Manteca

	<u>Pleasanton</u>	<u>Livermore</u>	<u>Mt House</u>	<u>Tracy</u>	<u>Manteca</u>
Miles From Mountain House	21	12	0	6	19
Miles from Pleasanton	0	9	21	27	40
<hr/>					
Employed Residents per Household ¹	1.60	1.51	1.44	1.41	1.32
<hr/>					
Jobs/Housing Ratio ²	1.08	0.77	0.99	0.58	0.55

¹ For existing cities, figures are calculated based on 1990 census data. For Mountain House, figure is derived using regression analysis that considers the geographic relationship between the areas.

² For existing cities, ratios are estimated based on available jobs and housing data, using a ratio of required housing to available housing. For Mountain House, jobs/housing goal is calculated in the same manner, as shown in Table 3.7: Analysis of Jobs/Housing Balance Over Time.

- f) The primary emphasis of the Jobs/Housing Program shall be to rely on market forces to attain desired jobs/housing goals, rather than on overt governmental action, such as restricting residential development to correct jobs/housing imbalances.

Implementation:

- a) Job Attraction Program. The job attraction program shall involve passive forms of marketing, emphasizing community design, the locational benefits of the community, and the information dissemination features of the monitoring program. Assisting applicants to facilitate projects and assuring an inventory of sites that are ready to develop shall be elements of the program as well. Appendix 3-A describes the elements of the job attraction program in more detail.
- b) Job Development Program. As part of an overall economic development program, specific job development efforts shall offer various incentives to prospective developers and tenants. In addition, there shall be close coordination with a network of brokers specializing in commercial and industrial land uses to target specific industries and companies and to mount a recruiting effort that may be international in scope. Other commercial and industrial developers, the San Joaquin Partnership, and the County shall be integrated into the program. Further information about the active forms of marketing in the job development program is contained in Appendix 3-A.
- c) Economic Development Staff. A full-time economic development position, with support staff as necessary, shall be created so that potential employers can be actively pursued and secured. An individual qualified in the aspects of job development identified in the Master Plan shall be hired to fill the position. The Master Developer initially, or a coalition of builders and landowners ultimately, shall fund the position until such time as it is no longer needed, as determined by the County. This obligation shall be provided for in the Development Agreement between the County and property owners participating in the development of the community.
- d) Jobs/Housing Reviews. ~~The jobs/housing program shall be monitored annually as described in the monitoring and enforcement section below. In addition, The San Joaquin County Board of Supervisors shall hold a Public Hearing, referred to as a~~ Jobs/Housing Review, to review the progress of the jobs/housing program at the following specified times:
- Prior to the approval of any Specific Plan (excluding the first Specific Plan or Specific Plan Amendment).
 - ~~When 4,000, 8,000, 12,000, and 16,000 residential units have been completed and annual monitoring information becomes available, if a review~~ Every three years after construction begins, but no sooner than after 2,000 residential units have been constructed, provided a Jobs/Housing Review has not already been conducted in the previous calendar year.
 - At any other times determined appropriate by the Board of Supervisors (e.g., scheduling of a Jobs/Housing Review by the Board to evaluate the circumstances for non achievement of jobs/housing ratios).

Table 3.6

**MOUNTAIN HOUSE JOBS/HOUSING ANALYSIS
ANALYSIS OF JOBS/HOUSING BALANCE OVER TIME**

	<i>Approx. 4,000 Residential Units Completed</i>	<i>Approx. 8,000 Residential Units Completed</i>	<i>Approx. 12,000 Residential Units Completed</i>	<i>Residential Buildout: 16,105 Residential Units</i>	<i>Employment— Generating Uses Built Out</i>
	<i>Year 7</i>	<i>Year 12</i>	<i>Year 16</i>	<i>Year 20</i>	<i>Year 25</i>
Cumulative Residential Units Built and Available for Occupancy	4,176	8,421	12,095	16,105	16,105
Cumulative Population—Serving Jobs	2,259	5,068	8,067	11,080	11,464
Cumulative Regional Jobs	2,236	5,159	7,401	9,668	10,460
Cumulative Permanent Jobs Created	4,495	10,227	15,469	20,747	21,924
Required Housing to Serve Employees Filling Permanent Jobs	3,279	7,459	11,283	15,133	15,992
Population—Serving Jobs as a Percent of All Permanent Jobs	50.3%	49.6%	52.2%	53.4%	52.3%
Best Case Jobs/Housing Ratio ¹	0.79	0.89	0.93	0.94	0.99

¹ Project buildout ratio of 0.99 is calculated as follows:

$$\begin{array}{lclclcl}
 \text{Required Housing} & = & (\text{\# of Jobs} \div \text{Average \# of Employed Residents per Household}) \times (1 + \text{Vacancy Rate}) & = & (21,924 \div 1.44) \times (1 + 0.05) & = & 15,992 \\
 \text{Available Housing} & = & \text{\# of Housing Units Built and Available for Occupancy} & = & 16,105 & = & 16,105
 \end{array}$$

Source: David Taussig & Associates, Inc.

02/11/94

Table 3.7

MOUNTAIN HOUSE JOBS/HOUSING ANALYSIS
ANALYSIS OF VARIOUS JOBS/HOUSING SCENARIOS OVER TIME

<i>Jobs / Housing Scenario</i>	<i>Approx. 4,000 Residential Units Completed</i>	<i>Approx. 8,000 Residential Units Completed</i>	<i>Approx. 12,000 Residential Units Completed</i>	<i>Residential Buildout: 16,105 Residential Units</i>	<i>Employment— Generating Uses Built Out</i>
	<i>Year 7</i>	<i>Year 12</i>	<i>Year 16</i>	<i>Year 20</i>	<i>Year 25</i>
Population—Serving Jobs Only ¹	0.39	0.44	0.49	0.50	0.52
Minimum Ratio ²	0.70	0.80	0.85	0.90	0.95
Best Case	0.79	0.89	0.93	0.94	0.99

¹ Ratio of housing required for holders of population—serving jobs to all available housing.

² Assumes a three—year lag of jobs behind housing.

The specific jobs/housing ratios that To determine whether the community is meeting its jobs/housing goals, the following will be tracked: and the associated enforcement provisions include the following:

- Best Case Ratios: Best Case Ratios resulting from project development should generally conform with the Best Case Ratios specified in the Master Plan and any applicable Specific Plan; The jobs/housing goal is estimated to improve over time from 0.79 by the end of the first Specific Plan to 0.99 at project buildout. These "Best Case" jobs/housing ratios are presented in Table 3.6: Analysis of Jobs/Housing Balance Over Time.
- Minimum Ratios: The Minimum Ratios resulting from project development should generally conform with the minimum ratios specified in the Master Plan and any applicable Specific Plan; averages only 4% to 9% less than the Best Case Ratio; over time, the Minimum Ratio approaches the Best Case Ratio. Minimum Ratios for years or residential units not shown shall be interpolated. The Minimum Ratios are presented in Table 3.7: Analysis of Various Jobs/Housing Scenarios Over Time.
- Average Job Densities. Job densities resulting from commercial and industrial development in the community should generally conform with the Average Job Densities specified by land use category by neighborhood in Table 3.1: Land Use Program.

The County Planning Commission shall make recommendations to the Board as part of the Jobs/Housing Review process. Both the Planning Commission and the Board of Supervisors shall consider information contained in the Monitoring Report submitted to the Board each April 1st indicating whether the minimum jobs/housing ratios specified in the Master Plan and any applicable Specific Plans have been achieved. In addition, both bodies shall consider the data and issues described below. Said information shall be addressed in a written report with findings compared by the County Community Development Director.

- Recent efforts in the job creation program;
- Commitments for future jobs;
- A comparison of the job creation rate in the project with local, State, and national economic or market trends and financing availability;
- The types of jobs created to date (e.g., the wage scale or salary level of the jobs, and what portion are full-time vs. part-time positions) and how many are in "basic" industries (non-local);
- The financial/fiscal impacts on the County, Community Services District, public financing districts, and the community of not meeting jobs/housing goals;
- The effects of including construction jobs in the calculation of the jobs/housing ratio;
- Efforts that have been made by the County to facilitate and encourage job development;

- Actual job densities (jobs per acre or square foot) that have been achieved for commercial and industrial uses, compared to the average job densities specified in table 3.1.

In addition to the above, the Planning Commission and the Board shall consider other applicable factors which are for the most part outside of the control of the Master Developer and the County. These may include the market availability of land; employment consequences associated with economic cycles; the hiring, firing, and layoff practices of individual companies; and the unused employment capacity of structures which have been built in the community.

- e) ~~Enforcement: If it is determined during a formal review of the jobs/housing program that the minimum ratios have not been achieved, the San Joaquin County Board of Supervisors shall evaluate the circumstances associated with non-achievement, ascertain the potential adverse impacts on the County, and develop an appropriate course of action. The Board shall consider testimony from members of the public, and developers and landowners in the project, and shall evaluate the following issues:~~

- ~~• Recent efforts in the job creation program, including specific employers that are considering or have committed to locating in Mountain House.~~
- ~~• A comparison of the job creation rate in the project with local, State, and national economic or market trends and financing availability.~~
- ~~• The fact that the master developer and CSD will not be able to control certain factors affecting job creation, including regional economic and market cycles and landowners other than the master developer who are unwilling to sell land zoned for commercial/industrial development.~~
- ~~• The types of jobs created to date, including an evaluation of the wage scale or salary level, the portion of full-time vs. part-time positions, and the number of jobs in regional vs. population-serving industries.~~
- ~~• The financial effects that discontinued or interrupted residential development will have on Community Services District operations and public financing districts in the community.~~
- ~~• The effects of including construction jobs in the calculation of the jobs/housing ratio.~~
- ~~• Efforts that have been made by the County to facilitate and encourage non-residential development.~~

~~If developers and landowners have directly, or through the CSD, made a best faith effort to implement to the fullest extent possible the job attraction and job development measures specified in the Master Plan, the County shall allow residential building to continue.~~

- e) Enforcement: Following considerations of all public testimony, written materials and recommendations of the Planning Commission, received during the Jobs/Housing Review, the Board shall decide on a course of action to address the jobs/housing issue. The Board shall focus on taking one or more of the following actions:

- (1) Find that no action is necessary; or
- (2) Direct County staff to revise jobs/housing targets that will ensure that jobs/housing goals will be substantially met in the future; and/or
- (3) Recommend that certain actions be taken by the Master Developer and /or other developers within the project to increase job creation; and/or
- (4) Approve future Specific Plans only if it can be demonstrated that the community will reach minimum jobs/housing ratios.

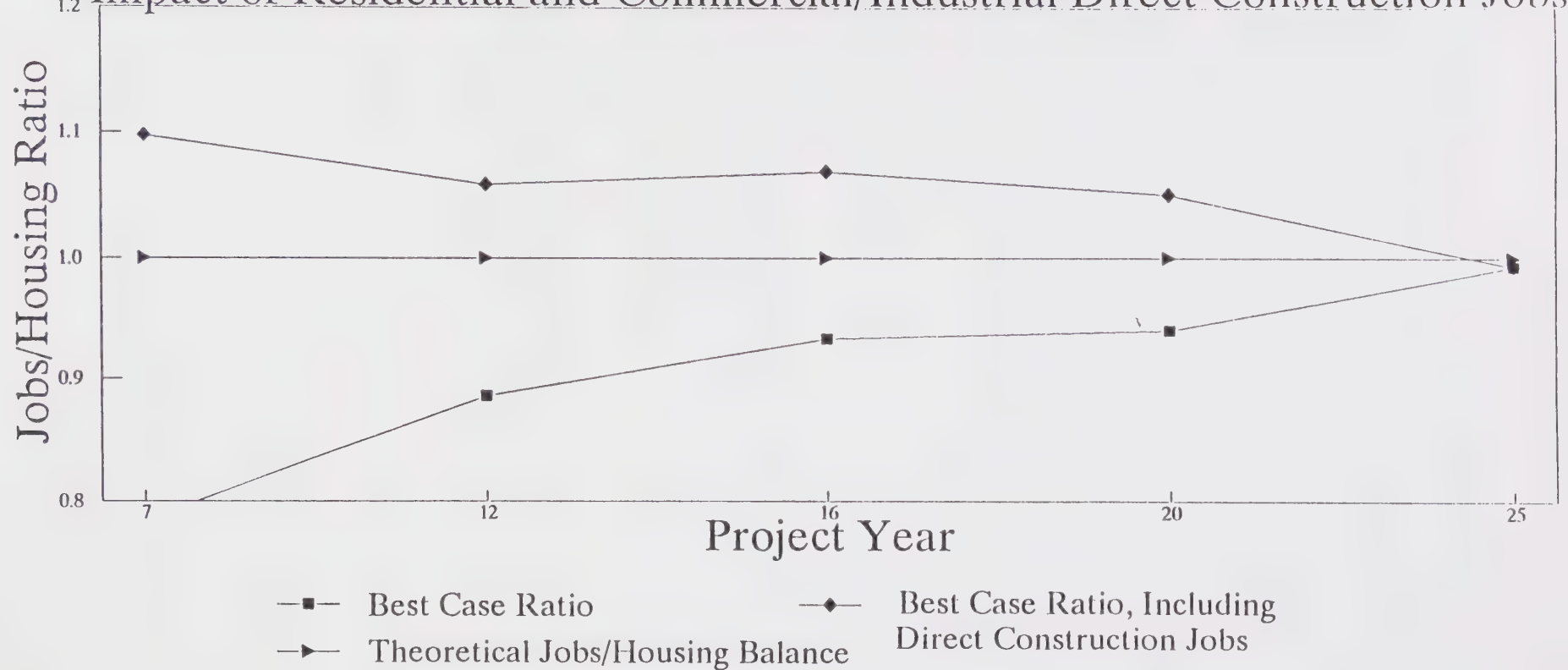
Any proposed action by the Board that would affect the mix and/or rate of residential development shall require the preparation of a study for Board consideration and action that assesses the impacts on affected parties (e.g., the CSD, CFDs, private developers, bond shareholders, the County, etc.). This study shall also consider potential undesirable impacts arising from such Board action (e.g., possible restriction on the creation of population-serving jobs and region-serving jobs due to a reduction in population growth; possible limitation on the operation of existing population-serving and some region-serving businesses; etc.). Other items to be considered include:

- Commercial and industrial land uses designated for each neighborhood should meet the minimum job densities shown in table 3.1: Land Use Program.
 - Redesignation or downzoning of commercial/industrial land to non-employment uses (such as residential uses), shall only be permitted after review by the County to determine the impact on jobs/housing.
 - Direct construction jobs generated solely to support the buildout of Mountain House shall be considered when analyzing the community's jobs/housing balance.
- f) Redesignation and rezoning of commercial and industrial land to non-employment uses (such as residential uses) shall be approved only if the county determines that the proposed redesignation or rezoning will not have a negative impact on the Mountain House Jobs/Housing and Affordable Housing programs.

Table 3.8

Mountain House Jobs/Housing Analysis

Impact of Residential and Commercial/Industrial Direct Construction Jobs



Estimated Annual Direct Construction Jobs

1,900

2,000

2,200

2,400

0

3.9.3 Affordable Housing Program

The affordable housing program is designed so that Mountain House employees at all income levels have the opportunity to purchase or rent safe and decent homes in the community. Implementing a housing trust fund supported by an affordable housing fee, scattering second units throughout the R/M, R/L, and R/VL areas, and encouraging development of additional units in the town center and R/H areas, are the primary vehicles to serve lower income households.

Affordable housing for lower income households is encouraged to be built in a timely manner, but only to the extent that sufficient demand exists. Over 18% of the residential units are designed to meet the needs of very low to low income households, as shown on Table 3.10: Household Income Categories for Planned Units. In addition, the program facilitates the integration of affordability throughout the community rather than limiting it to isolated pockets.

The affordable housing program sets forth quantifiable goals over time that will be reviewed by County staff and the Board of Supervisors to determine if the community is achieving these goals.

Objective: To ensure that housing is available and affordable to all employees in Mountain House.

Policies:

- a) Households at every income level shall be able to find housing that is affordable.
- b) Assistance shall be made available to fill affordability gaps for specified households that cannot find affordable housing.
- c) Affordability of housing shall be evaluated at identified project intervals.
- d) The primary emphasis of the Affordable Housing Program shall be to rely on market forces, coupled with land use design and density constraints, to dictate the appropriate number, monthly rents, and sales prices of dwelling units within the community.

Implementation:

- a) Affordable Housing Plan

The affordable housing plan is designed to be implementation-oriented and includes the following five elements. ~~(all described further in Appendix 3-B):~~

- 1) Community Design. Residential and non-residential land uses shall be developed as proposed in this Master Plan.
- 2) County Incentives. Fee reductions or deferrals shall be considered for single family homes with second units (described below), for all high-density residential (R/H) developments, and for development proposals that include Extra Allowable Units.

- 3) Employer Programs. Employers shall be encouraged, although not required, to implement the following two programs in coordination with the CSD or Mountain House Housing Trust Fund (described below):

- Employer-assisted housing that involves down payment assistance, mortgage buydowns, or other incentives to employees choosing to live in Mountain House.
- Employee housing bulletin, incorporated into the CSD job creation program, that matches housing needs with housing opportunities in the community.

~~d) Second Units. At least 6.5% of the total R/VL, R/L, and R/M units approved for each neighborhood shall be designated to include second units. Tentative Maps shall identify lots or parcels designated for second units. Second units shall not be subject to an affordable housing fee (described below), or public facility impact fees.~~

~~e) Extra Allowable Units. In addition to the minimum number of second units specified above, a minimum of 240 additional units will be developed in the Town Center, and a minimum of 189 additional units will be built in other high density residential areas. If more than 189 additional units are approved in designated R/H areas, then the number of additional units planned for the Town Center will be reduced accordingly. A minimum of 100% of all extra allowable units designated for each neighborhood shall be built. If it is determined by County staff that extra allowable units will be affordable to very low income households, these units will be exempt from impact fees and affordable housing fees. In addition, the County shall work to facilitate any development proposal that includes extra allowable units.~~

- 4) Extra Allowable Units. Each neighborhood shall contain a specified minimum number of extra allowable units. To encourage the production of such units, the County shall work to facilitate any development proposal that includes extra allowable units. The total extra allowable units planned for the community together with related additional policies are provided below:

- Second Units. At least 6.5% of the total R/VL, R/L, and R/M units approved for each neighborhood shall be designated to include second units. Tentative Maps shall identify lots or parcels designated for second units. Second units shall not be subject to an affordable housing fee (described below), or to public facility impact.
- Other Extra Allowable Units. A minimum of 240 extra allowable, high density units are planned for the Town Center, and a minimum of 189 extra allowable, high density units are planned for other high density residential areas. If more than 189 extra allowable units are approved in designated R/H areas, then the number of extra allowable units planned for the Town Center may be reduced accordingly. If it is determined by County staff that extra allowable units will be affordable to very low income households, these units shall be exempt from public facility impact fees and affordable housing fees.

- 5) Mountain House Housing Trust Fund. The Mountain House Housing Trust Fund (MHHTF) shall be enacted to make housing affordable for lower income households in Mountain House. The MHHTF shall be implemented as follows:

- The MHHTF shall be established as a non-profit California corporation, with a five-member Board of Directors and a trust fund manager. The Board shall consist of certain members as described in Appendix 3-A.
- The MHHTF shall receive revenues generated by an affordable housing fee levied against all new residential development in Mountain House except second units and high density units. The fee shall be based on unit size and lot size and shall be adjusted annually to account for changes in the median price of new homes sold in San Joaquin County as determined by an organization deemed appropriate by the MHHTF Board of Directors. The affordable housing fee shall not be applied to non-residential land uses.

As discussed in detail in Appendix 3-B, the affordable housing fee was calculated to generate an amount that, when combined with state and federal matching funds, will produce revenues sufficient to provide housing subsidies to very low income households in Mountain House. Based on this analysis, the affordable housing fee is the following:

\$0.48 per square foot of livable area in a residential unit, plus
\$0.06 per square foot of lot space

Although the fee was calculated to generate an amount that could be used for rent subsidies, the program does not rely on such subsidies. Given the indefinite period of time over which rent subsidies could be required, such subsidies are an expensive form of assistance. The MHHTF Board of Directors (discussed further below) can use these revenues to supplement or supplant rent subsidies with assistance to affordable housing developers, land purchases, or other programs for lower income households. Additional alternatives are discussed in Appendix 3-B.

- San Joaquin County shall collect the affordable housing fee when a residential building permit is issued. Affordable housing fees shall be remitted immediately to the MHHTF. The MHHTF Board of Directors shall use its discretion to decide how the fee revenues are applied to affordable housing needs in the community. The Board shall also consider options to sustain the fund after the affordable housing fee revenues end when the project builds out.
- 6) Income Test and Verification Process. For dwelling units proposed as affordable housing for Very Low and Low Income households, an income test and verification process shall be developed to ensure occupancy by such groups. In addition, mechanisms shall be developed to provide reasonable

assurance that the number of affordable units remain occupied by Very Low and Low Income Households.

- 7) Minimum Residential Densities. Subject to the provisions of Section 3.3: Land Use Regulations and Permitted Uses, residential densities in each land use category shall not fall below a specified minimum number of dwelling units per acre by neighborhood as indicated in Table 3.3: Maximum and Minimum Residential Units by Neighborhood.
- 8) Redesignation to Lower Densities. Redesignation of higher density residential land (e.g., R/H) to lower density land (e.g., R/M) uses shall be approved only if the County determines that the proposed redesignation or rezoning will not have a negative impact on the Mountain House Jobs/Housing and Affordable Housing Programs.

Affordability Requirements

- g) ~~The affordable housing program shall be monitored annually, adjusted as appropriate, and subject to review by the San Joaquin County Board of Supervisors.~~
- h) ~~The project shall achieve the minimum affordability indices as presented in Table 3.11: Affordability Index Goals Over Time. The indices are differentiated by income category. It is anticipated that the affordability index for moderate income households will be higher during project development than the index for low and very low income households because a larger quantity of more diverse products will be available to this higher income group.~~
- i) ~~If it is determined during the annual monitoring of the affordable housing program that the specified affordability indices have not been achieved, the San Joaquin County Board of Supervisors will consider testimony from the MHHTF Board and developers and landowners in Mountain House to evaluate the circumstances further and develop an appropriate course of action. As part of this review, the Board shall consider the following:~~
 - ~~The extent to which infusion of fee revenues into the MHHTF was sufficient to meet the needs of lower income households.~~
 - ~~Recent efforts to leverage MHHTF revenues with other public and private affordable housing funding, including specific programs that will potentially contribute to the Mountain House affordable housing program within the next two years.~~
 - ~~The intent of the affordable housing program is to rely on market forces, coupled with land use design and density constraints, to dictate the appropriate number of homes and the appropriate monthly rents and sales prices. To the extent these forces result in rents and sales prices that are higher than originally planned, the affordable housing fee will generate additional revenues that can be used towards very low income housing in the community.~~
 - ~~Efforts on behalf of the County to facilitate the development of affordable housing, including second units and additional R/H units.~~

- ~~After consideration of these issues, the Board of Supervisors will decide whether to adopt changes to the program, such as modifying the land use design, revising residential densities, adjusting the affordable housing fee, or restructuring the program.~~

b) Affordable Housing Reviews. The San Joaquin County Board of Supervisors shall hold a Public Hearing, referred to formally as an Affordable Housing Review, to review the progress of the Affordable Housing Program at the following specified times:

- Prior to the approval of any Specific Plan, excluding the first Specific Plan or Specific Plan Amendment;
- Every three years after construction begins, but no sooner than after 2,000 residential units have been constructed, provided an Affordable Housing Review has not already been conducted in the previous calendar year; or
- At any other times determined appropriate by the Board of Supervisors (e.g., scheduling of an Affordable Housing Review by the Board to evaluate the circumstances for non achievement of affordability indices).

The County Planning Commission shall make recommendations to the Board as part of the Affordable Housing Review process. Both the Planning Commission and the Board of Supervisors shall consider information contained in the Monitoring Report submitted to the Board each April 1st indicating whether the affordability indices specified in the Master Plan and any applicable Specific Plans have been achieved. In addition, both bodies shall consider the data and issues described below. Said information shall be addressed in a written report with findings prepared by the County Community Development Director.

- The percentage and number of new High Density, Medium-High Density, and Second Unit Dwelling units that are being offered for rent or sale at affordable levels and that have been occupied by very low income and low income families;
- The amount of Housing Trust Fund monies that have been collected;
- The involvement of other public or private housing program moneys that have been leveraged with Housing Trust Fund Monies;
- The extent to which Housing Trust Fund programs that have been established and funded have met the needs of lower income households;
- Whether any specific programs will contribute to the Affordable Housing Program within the next two years;
- The type of jobs created to date (e.g., wage scale or full or part-time) and what portion of the new jobs are "basic" (non-local); and
- The relationship of the Affordable Housing Program to local, State, and national economic or market trends and financing availability.

Table 3.9

**MOUNTAIN HOUSE AFFORDABLE HOUSING ANALYSIS
SUMMARY OF AFFORDABILITY ANALYSIS**

<i>Average Annual Household Income</i>	<i>Affordable Monthly Rent</i>	<i>Affordable Home Price ¹</i>	<i>Required Housing (Including 5% Vacancy)</i>	<i>Planned Housing (Including Extra Allowable Units) ²</i>	<i>Affordability Index ³</i>
\$13,900	\$300	\$33,000	393	617	157%
17,500	390	43,000	739	1,158	157%
22,500	490	55,000	926	926	100%
27,500	610	70,000	1,023	1,023	100%
32,500	740	88,000	1,332	1,332	100%
37,500	860	123,000	1,353	1,353	100%
42,500	960	137,000	1,385	1,454	105%
47,500	1,090	166,000	1,408	1,549	110%
52,500	1,210	186,000	1,427	1,597	112%
57,500	1,340	205,000	1,256	1,633	130%
67,500	1,570	250,000	2,292	2,292	100%
87,500	2,050	300,000	1,719	1,719	100%
112,500	2,660	425,000	582	582	100%
137,500	3,270	425,000	85	85	100%
175,000	4,210	425,000	70	70	100%
			15,992	17,391	

¹ Affordable home prices reflect estimated actual home prices; they represent home prices assuming households at an income level of \$60,000 or less will seek housing only at their defined affordability level (not below and not above) and households above \$60,000 will seek housing below their defined affordability level.

² In addition to the 16,105 authorized units, planned housing includes 1,286 extra allowable units. Of the extra allowable units, 857 are second unit dwellings and 429 are additional R/II units. 214 second units, which represent 25% of the total 857 proposed second units, and all 429 additional R/II units are anticipated to help meet the needs of very low income households.

³ Ratio of planned housing to required housing for each household income level. Housing at an average \$425,000 price level is provided to meet the needs of households with incomes exceeding approximately \$100,000.

Table 3.10

MOUNTAIN HOUSE AFFORDABLE HOUSING ANALYSIS
HOUSEHOLD INCOME CATEGORIES FOR PLANNED UNITS

<i>Average Annual Household Income</i>	<i>Planned Housing ¹</i>	<i>Household Income (Percent of AMI) ²</i>	<i>Approximate Income Category</i>
\$13,900	393	36.4%	Very Low Income
17,500	739	45.8%	Very Low Income
Subtotal	1,132		
Percent of Total		6.8%	
22,500	926	58.9%	Low Income
27,500	1,023	72.0%	Low Income
Subtotal	1,949		
Percent of Total		11.6%	
32,500	1,332	85.1%	Moderate Income
37,500	1,353	98.2%	Moderate Income
42,500	1,454	111.3%	Moderate Income
Subtotal	4,139		
Percent of Total		24.7%	
47,500	1,549	124.3%	Above Moderate Income
52,500	1,597	137.4%	Above Moderate Income
57,500	1,633	150.5%	Above Moderate Income
67,500	2,292	176.7%	Above Moderate Income
87,500	1,719	229.1%	Above Moderate Income
112,500	582	294.5%	Above Moderate Income
137,500	85	359.9%	Above Moderate Income
175,000	70	458.1%	Above Moderate Income
Subtotal	9,528		
Percent of Total		56.9%	

¹ This table excludes 643 second unit dwellings that are not assumed to be utilized by very low income households.

² Area Median Income is assumed to equal 1993 estimated San Joaquin County median household income of \$38,200.

Table 3.11

MOUNTAIN HOUSE AFFORDABLE HOUSING ANALYSIS
AFFORDABILITY INDEX GOALS OVER TIME¹

<i>Income Category</i>	<i>Approx. 4,000 Residential Units Completed</i>	<i>Approx. 8,000 Residential Units Completed</i>	<i>Approx. 12,000 Residential Units Completed</i>	<i>Residential Buildout: 16,105 Residential Units</i>	<i>Employment – Generating Uses Built Out</i>
	<i>Year 7</i>	<i>Year 12</i>	<i>Year 16</i>	<i>Year 20</i>	<i>Year 25</i>
Very Low Income Households ²	40%	60%	80%	100%	100%
Low Income Households ³	60%	75%	90%	100%	100%
Moderate Income Households ⁴	80%	90%	100%	100%	100%

¹ For a given income category, the Affordability Index is the percentage of housing needs that are being met. The index is calculated as the ratio of housing planned for a given income category to housing required for a given income category at each major project interval.

² Households with annual incomes less than approximately 50% of Area Median Income.

³ Households with annual incomes of approximately 50% to 80% of Area Median Income.

⁴ Households with annual incomes of approximately 80% to 120% of Area Median Income.

c) Enforcement. Following consideration of all public testimony, written materials and recommendations of the Planning Commission, received during the Affordable Housing Review, the Board shall decide on a course of action to address the affordable housing issue. The Board shall focus on taking one or more of the following actions:

- (1) Find that no action is necessary; or
- (2) Direct County staff to revise targets for affordable housing units that will ensure that Affordable Housing goals will be substantially met in the future; and/or
- (3) Recommend that certain actions be taken by the Master Developer, other developers and/or by the MHHTF Board to increase the number and/or type of affordable units; and/or
- (4) Direct County staff to prepare a study for Board consideration and action that assesses the impacts of certain specified amendments to the Master Plan to achieve affordable housing goals (e.g., revising residential densities, adjusting the affordable housing fee, restructuring the Affordable Housing Program, etc.); and/or
- (5) Approve future Specific plans only it can be demonstrated that the community will reach affordable housing targets.

Any proposed action by the Board that would affect the mix and/or rate of residential development shall require the preparation of a study for Board consideration and action that assesses the impacts on affected parties (e.g., the CSD, CFDs, private developers, bond shareholders, the County, etc.). This study shall also consider potential undesirable consequences arising from such Board action (e.g., interruption in the flow of affordable housing fees into the MHHTF possibly adversely affecting new affordable housing development).

3.9.4 Monitoring and Enforcement

The monitoring program for jobs/housing and affordable housing will utilize various statistical data gathered as part of the overall community monitoring program. The results of the data analysis will provide an opportunity to rethink certain development programs or operational issues depending on how the results compare to expectations. Procedures will be in place to modify or update the jobs/housing and affordable housing programs to reflect increased knowledge or changes in the plan over time.

Monitoring and enforcement guidelines, in addition to those delineated above as part of the jobs/housing and affordable housing programs, are presented below:

- a) Statistical categories to be evaluated shall include, but not be limited to the following:
- Businesses and industries
 - Jobs and wages
 - Housing units and employed residents
 - Household incomes
 - Housing products and costs
 - Residential densities

- Location of employment and vehicle miles traveled to measure the extent of in- and out-commuting
 - Inventory of the following, organized and summarized by General Plan land use category and including employment estimates, sales price and rental price range as appropriate: ~~absorbed and remaining residential and non-residential land uses~~
 - Pending residential units being considered for approval;
 - Approved residential units not yet built;
 - Built and occupied residential units;
 - Pending non-residential gross square footage being considered for approval;
 - Approved non-residential gross square footage not yet built;
 - Built and occupied non-residential gross square footage.
 - Companies and individuals who decided not to move to Mountain House (why they decided not to move to Mountain House, where they did decide to move, etc.).
- b) The CSD shall be responsible for the monitoring effort in cooperation with the County. Structured monitoring and analysis shall be conducted annually, with funding provided through the CSD.
- c) The results of the analysis shall be ready by April 1 following each calendar year and shall be reviewed in detail with the County. Various formats of summary level information and conclusions shall be made available to community businesses and residents and incorporated into promotional materials.

Note: d) and e) below moved to Implementation.

- d) ~~The following controls shall apply to the jobs/housing program:~~
- ~~Commercial and industrial land uses designated for each neighborhood should meet the minimum job densities shown in table 3.1: Land Use Program.~~
 - ~~Redesignation or downzoning of commercial/industrial land to non-employment uses (such as residential uses), shall only be permitted after review by the County to determine the impact on jobs/housing.~~
 - ~~Direct construction jobs generated solely to support the buildout of Mountain House shall be considered when analyzing the community's jobs/housing balance.~~
- e) ~~The following controls shall apply to the affordable housing program:~~
- ~~Subject to the provisions of Section 3.3: Land Use Regulations And Permitted Uses, residential densities in each land use category shall not fall below a specified minimum number of dwelling units per acre by neighborhood as indicated in Table 3.3: Maximum and Minimum Residential Units by Neighborhood.~~
 - ~~Redesignation or downzoning of higher density land (e.g., multi-family R/H) to lower density land (e.g., single family R/M) uses, shall only be permitted after review by the County to determine the impact on housing affordability.~~

3.10 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Land Use and Zoning. Based on the land use plan and program provided in this chapter, future Specific Plans shall establish final acreages and boundaries for all land uses and define zoning districts for each defined parcel.
- b) Pre-Existing Land Uses. Specific Plan requirements for areas of pre-existing land uses are as follows:
 - The AU-20 zone shall be changed to an urban zone if and when a Specific Plan or amendment to a Specific Plan is approved for any of the pre-existing residential areas.
 - The “Old River Homesites” area shall be included in the Specific Plan for Neighborhood K, and the “Homesite Parcels” areas shall be included in the Specific Plan for Neighborhood B, to ensure that these areas are taken into consideration when adjacent urban development is proposed.
 - Specific Plans for areas adjacent to pre-existing residential areas which will remain in residential use shall include provisions to ensure land use compatibility between proposed and existing uses, and shall plan for future extension of urban services and facilities into these areas.
- c) R/L and R/M Designations. All areas designated with a combined R/L and R/M Master Plan designation shall be specifically zoned in a Specific Plan.
- d) Residential Program Shortfall. Future Specific Plans ~~may shall consider~~ adding the shortfall (i.e. the difference between neighborhood maximum and minimum density [units]) experienced in prior Specific Plans. Inclusion of such units into future Specific Plans shall require an amendment to this Master Plan and possible additional environmental review.
- e) Residential Neighborhoods. Specific Plans for residential areas shall provide conceptual layouts and guidelines for all roadways and for the school sites, parks, commercial areas and other uses within the neighborhoods.
- f) Town Center Specific Plan. One Specific Plan shall be prepared and approved for the entire Town Center prior to the establishment of any permanent use within the boundaries of the Town Center. The Specific Plan for the Town Center may be initiated by the County, CSD, or property owner. The Town Center Specific Plan shall include the following areas: the mixed use portion with the open space core, the Central Community Commercial, and the area north to Mountain House Creek, planned predominantly for open space and public uses. No development of this area shall occur without it being addressed in the Specific plan. Phased development within the Specific Plan area may necessitate modification of the Specific Plan through subsequent plan amendments.
- g) Neighborhood Relationship to Town Center. Specific Plans and subsequent development plans prepared prior to development of the Town Center shall carefully consider the ultimate buildout of the Town Center in the design of roadways and site plans.
- h) Town Center FAR's. Floor Area Ratios (FAR's) for the Town Center shall be defined by the Specific Plan for the affected area(s) in order to respond to market conditions in affect when the Town Center is developed.

- i) ~~Neighborhood Commercial.~~ Each Neighborhood Specific Plan shall include the location and conceptual site plan for each Neighborhood Commercial site.
- j) ~~Specific Plan I Commercial.~~ The first Specific Plan shall designate an accessible and appropriate location for a commercial area that will provide a grocery store for the first phase of development.
- i) Freeway Service Commercial. Each Specific Plan containing Freeway Service Commercial uses shall include a site development concept for the entire C/FS zone indicating circulation, access, building areas, common landscape setbacks and conceptual uses.
- j) Industrial Park Zoning. All industrial areas located south of Byron Road shall be zoned I-P by Specific Plans.
- k) Jobs/Housing and Affordable Housing Requirements. Approval of Specific Plans shall include evaluation by the County of specific jobs/housing ratios (including comparison to the housing and jobs assumed on Table 3.6) and progress of the jobs/housing program. Additional details of affordable housing incentive programs, if any, shall be addressed by each Specific Plan.
- l) Master Plan Designated Senior Housing Sites. The R/H and R/MH sites indicated by the Land Use Plan shall be developed primarily as senior housing, unless the need for such housing is determined not to exist during preparation of the Specific Plan for Neighborhood H.
- m) Additional Senior Housing Sites. Except for Specific Plan I, Specific Plans shall consider the need for additional senior housing sites, and shall designate sites where such a need is determined and a method to reserve the sites for seniors.

CHAPTER FOUR



DEVELOPMENT AND DESIGN

CHAPTER FOUR: DEVELOPMENT AND DESIGN

4.1	INTRODUCTION	1
4.2	DEVELOPMENT STANDARDS	1
4.2.1	Lot and Structure Standards	1
4.2.2	Grading Standards	1
4.2.3	Parking and Loading Requirements	2
4.2.4	Building Requirements	2
4.2.5	Signage	3
4.2.6	Lighting	4
4.2.7	Walls and Fences	5
4.2.8	Site Furnishings	5
4.2.9	Public Art and Monuments	6
4.2.10	Siting Criteria for Community Facilities	6
4.2.11	Gas and Electric Transmission Easements	7
4.3	COMMUNITY EDGES	7
4.3.1	Community Edges	7
4.3.2	West Edge Treatment	8
4.3.3	East Edge Treatment	15
4.3.4	South/Freeway Edge Treatment	24
4.3.5	North Edge at Regional Park	29
4.4	LANDSCAPE CONCEPT AND POLICIES	31
4.5	SPECIFIC PLAN REQUIREMENTS	35

List of Figures

Figure 4.1: Community Edge Treatment Key Map	9
Figure 4.2: Community West Edge at Marina Boulevard	12
Figure 4.3: Community West Edge at Residential	13
Figure 4.4: Community West Edge at General Commercial	14
Figure 4.5: Community East Edge at Patterson Pass (Main Street to Byron Road)	17
Figure 4.6: Community East Edge at Patterson Pass (Mascot Boulevard to Main Street)	18
Figure 4.7: Community East Edge at Patterson Pass (Grant Line Road to Mascot Boulevard)	19
Figure 4.8: Community East Edge at Patterson Pass (Central Parkway to Grant Line Road)	20
Figure 4.9: Community East Edge at Patterson Pass (I-205 to Central Parkway)	21
Figure 4.10: Community East Edge at Byron Road (Wicklund Road to Patterson Pass Road)	22
Figure 4.11: Community East Edge at Public Use/General Industrial	23
Figure 4.12: I-205 Edge at Business Park	26
Figure 4.13: I-205 Edge at Residential	27
Figure 4.14: Community Southwest Edge at Residential	28
Figure 4.15: Community North Edge at Regional Park	30
Figure 4.16: Landscape Concept Diagram	34

CHAPTER FOUR: DEVELOPMENT AND DESIGN

4.1 INTRODUCTION

This chapter presents land use regulations and development standards, including landscape architectural requirements. These regulations and standards will provide the basis for development of the entire Master Plan area.

Appendix 4-A: Mountain House Design Manual provides additional standards applicable to all subsequent submittals for Mountain House. The Design Manual addresses landscape design (including a plant list), architecture, signage, lighting, and site furnishings. Special topics such as design guidelines for noise control are also included. The Design Manual is intended as a working document which will be supplemented by further studies and information. It also includes an explanation of the design review process for projects within Mountain House.

4.2 DEVELOPMENT STANDARDS

The following section ~~discusses~~ **presents** standards for site development and building that apply to all development within Mountain House. Development Standards shall be in accordance with the County Development Title, the Mountain House Development Title, and/or Department of Public Works Improvement Standards unless addressed specifically below, or in subsequent Specific Plans.

The overall objective for development standards is to provide a guide for all development within Mountain House and to assure a high level of quality in the construction and operation of public and private buildings, open spaces and facilities.

Appendix 4-A: Mountain House Design Manual presents additional standards on buildings, signage, lighting, and site furnishings. Standards for street rights-of-way are presented in Chapter Nine: Transportation and Circulation.

4.2.1 Lot and Structure Standards

~~Figure 4.1: Typical Setback Measurements shows how setbacks are calculated. Figures 4.2 to 4.12 illustrate typical setbacks for residential, commercial, and industrial land uses. Lot and structure regulations shall be consistent with the County Development Title and the Mountain House Development Title. except as modified by Table 4.1: Lot and Structure Standards.~~

4.2.2 Grading Standards

Due to the gentle (approximately 1%) slope of the Mountain House area, grading is not a major component of construction, and the general topography of the land will not be significantly altered.

Chapter Six: Public Health and Safety, contains additional provisions related to geologic hazards including erosion and sedimentation.

Policies:

- a) Grading practices within the community shall minimize disruption to the natural topography; protect and enhance the projects' aesthetics; minimize risk to health

and property from improper control of storm drain water runoff, erosion and sedimentation; and provide for efficient construction operations.

- b) Residential lots shall be graded to direct storm water runoff towards public streets or easements and not across adjacent private property.
- c) Commercial and industrial sites shall be graded to direct on-site storm water runoff to public facilities and not across adjacent private property.
- d) Grading operations shall be planned and implemented to efficiently control erosion and sedimentation.
- e) ~~Off-site export or import of cut and fill material shall generally be limited to the import of special construction material or soils amendment material for landscaping.~~
- e) Sites developed adjacent to undeveloped property shall establish perimeter grades no lower than the adjacent land, and no more than one foot higher, unless accommodated within a landscaped area. Slopes within these areas shall not exceed 3:1 horizontal to vertical.
- f) Perimeter grades adjacent to developed properties shall match the adjacent grade, plus or minus one-half foot, unless occurring within a landscaped area.
- g) All site areas shall be graded to ensure positive drainage.
- h) Residential lots shall ~~generally~~ be graded such that the finished floor elevation is at least 12 -18 inches above the street curb.
- i) In order to help minimize visual impacts of Arterial streets, curb grades should be established 6-12 inches below the finished grade at the right of way line. Roadway median strips should be graded with a crown height approximately 6-12 inches above the curb, for a typical 14-foot wide median.
- j) Berms, channels and swales shall be shaped in such a way as to appear an integral part of the graded or paved surface, and designed with smooth transitions between changes in slope.

Implementation:

- a) Grading Requirements for Specific Plans. All Specific Plans shall provide typical grading details and grading concepts for any special conditions unique to the particular Specific Plan area, and not addressed by this Master Plan. Such conditions are expected to include areas along the Old River and within Neighborhood A.

4.2.3 Parking and Loading Requirements

All land uses shall follow the standards of the County Development Title, ~~Sections 9-1015 and 9-1020~~ and as addressed in Chapter Nine: Transportation and Circulation.

4.2.4 Building Requirements

The architectural character of Mountain House will consist of a variety of styles and building types. The intent is to encourage distinct areas of the community to develop a unique architectural character which will be consistently applied throughout that area.

Appendix 4-A: Mountain House Design Manual presents additional guidelines for architectural design.

Policies:

- a) The architectural character of Mountain House shall be varied but shall be consistent within distinct areas of the community.

Implementation:

- a) Mountain House Design Manual. A Mountain House Design Manual shall be approved prior to submittal of ~~any~~ the first Development Permit. The Manual shall address building requirements and architectural design guidelines for the Town Center, Village Centers, industrial and commercial areas, neighborhood non-residential buildings, and residential areas.
- b) Focus Areas. Special Purpose Plans for focus areas including Neighborhood Centers, Village Centers, the Freeway Commercial area, and the Central Commercial area shall describe more detailed site plans and guidelines for architecture. Such architectural treatments shall be coordinated with designs for landscape, lighting, signage, and site furnishings. Special Purpose Plans for Neighborhood Centers shall be approved prior to approval of the first Development Permit for the neighborhood. Other Special Purpose Plans shall be approved prior to approval of the first Development Permit within ~~for~~ the focus area (see Chapter Seventeen: Implementation).
- c) Industrial and Commercial CC&R's. Development standards and guidelines shall be developed for the business park and other industrial or commercial uses as part of comprehensive CC&R's for the respective areas. CC&R's ~~should~~ shall be consistent with the Master and Specific Plans and the Mountain House Design Manual and shall be submitted to the County prepared prior to approval of Tentative ~~parcel~~ Maps or other Development Permits. ~~improvement plans.~~

4.2.5 Signage

Signs throughout Mountain House will aid in establishing the sense of quality, continuity and character for the community, in addition to conveying necessary information.

In general, signs should be utilized only where necessary and in an understated manner, emphasizing an image of permanence and quality. The purpose of permanent signage is to convey information, to aid in identifying neighborhoods or other special areas and to add an element of consistency. The advertising function of signs should be minimized. All permanent signs and monuments should be constructed of durable, high quality materials such as stone, metal or masonry.

Appendix 4-A: Mountain House Design Manual contains additional provisions for signage.

Policies:

- a) All signs shall conform to the County Sign Regulations except as modified in the Mountain House Design Manual, or by future Specific Plans.

Implementation:

- a) Mountain House Design Manual. A Mountain House Design Manual shall be approved prior to submittal of ~~any~~ the first Development Permit. The Design Manual shall address signage requirements for community and neighborhood identification, business and industrial park identification, commercial identification, tenant signage, marketing, temporary parcel identification, and directional signage.
- b) Specific Plan Sign Provisions. Each Specific Plan shall describe any additional provisions for signage not covered by the Design Manual and applicable only to that Specific Plan Area.

4.2.6 Lighting

In general, lighting will be designed to minimize light levels for any given application and to emphasize high use areas or objects to be lighted. Low level, pedestrian scale fixtures will be utilized to the degree possible.

Exterior lighting will be shielded or recessed to minimize direct glare and reflections. Lighting that represents movement, flashes, blinks or is of unusually high intensity or brightness is prohibited.

Appendix 4-A: Mountain House Design Manual contains additional provisions for lighting.

Policies:

- a) Lighting throughout Mountain House shall be designed to differentiate use areas, emphasize community amenities, provide continuity along street corridors and ensure the safety of residents and users.
- b) Lighting throughout Mountain House shall be designed to minimize glare and impacts to adjacent land uses, especially residences.
- c) Special Purpose Plans and discretionary permits for significant commercial and industrial structures shall include specific designs to ensure that light and glare from the project would be minimized.

Implementation:

- a) Mountain House Design Manual. A Mountain House Design Manual shall be approved prior to submittal of any Development Permits. The Manual shall address lighting requirements for community and neighborhood streets, parking lots, pedestrian and entry areas, recreation areas and athletic facilities, landscape, service areas and security, and signs.

- b) Specific Plan Lighting Provisions. Each Specific Plan shall describe any additional provisions for lighting not covered by the Design Manual and applicable only to that Specific Plan Area.

4.2.7 Walls and Fences

Walls and fences will be an important component in the environment of Mountain House, providing privacy, security, shape important public spaces and help establish the character of the community.

Appendix 4-A: Mountain House Design Manual contains additional provisions for walls and fences.

Policies:

- a) Walls and fences shall be located and designed to assist in establishing the character of the community.

Implementation:

- a) Mountain House Design Manual. A Mountain House Design Manual shall be approved prior to submittal of any Development Permits. The Design Manual shall address the design of community and neighborhood walls, privacy fences, and open fences.

4.2.8 Site Furnishings

Site furnishings, including bus shelters, newspapers stands, benches, drinking fountains, trash urns, mailboxes, and other similar elements, are an integral component in establishing a distinct character for neighborhoods and discrete areas of Mountain House.

Appendix 4-A: Mountain House Design Manual contains additional provisions for site furnishings.

Policies:

- a) Site furnishings shall be located and designed to assist in establishing the distinct character of an area.

Implementation:

- a) Mountain House Design Manual. A Mountain House Design Manual shall be approved prior to submittal of any Development Permits. The Manual shall address the design and location of site furnishings including bus shelters, newspapers stands, benches, drinking fountains, trash urns, mailboxes, and other similar elements.
- b) Specific Plan Fencing and Walls Provisions. Each Specific Plan shall describe any additional provisions for fencing and walls not covered by the Design Manual and applicable only to that Specific Plan Area.

4.2.9 Public Art and Monuments

Public art is intended to enhance the visual appearance and cultural interest of public and private properties open to the general public. In general, public art will consist of sculpture, fountains, entry monuments, murals, and other art forms. Public art may be placed in parks, lobbies, plazas, entrances to communities, civic buildings, or other locations that are visible to the public.

Policies:

- a) Public art shall be incorporated into the development of public and private areas that are open to the general public.

Implementation:

- a) Provisions for Public Art. Special Purpose Plans for focus areas including the Neighborhood Centers, Village Centers, Freeway Commercial area, and Central Commercial area shall include provisions for public art applicable to that focus area. Special Purpose Plans for focus areas shall be approved prior to approval of the first Development Permit for the focus area (see Chapter Seventeen: Implementation).
- b) Town Center. The Town Center Specific Plan shall include provisions for public art.

4.2.10 Siting Criteria for Community Facilities

The purpose of siting criteria is to minimize land use conflicts and avoid aesthetic, functional, or other impacts to surrounding areas.

Policies:

- a) Public facilities that have internal functions that could be a threat to the health and safety of the community shall be sited in such a manner as to minimize the impact.
- b) Those public facilities that are of poor visual quality or conflict with the visual character of adjacent land uses shall be sited to minimize the adverse visual impact on the adjacent uses and the community in general. Techniques for mitigation of visual impacts include buffering by walls, fences and/or landscaping, use of color to disguise facilities, and architectural design to reduce the perceived mass and bulk of the structures.
- c) Those public facilities that have the potential to generate noise to a degree that would be a nuisance to adjacent land uses shall be designed and sited to minimize such impacts.
- d) Any public facility that has, as a part of its function, the potential for generating odors that would be a nuisance to adjacent land uses shall be designed and sited to minimize such impacts.
- e) Those public facilities that are intended to be accessed by the public shall be sited within the community and within the neighborhood in such a manner as to allow convenient public access and reduce the need for traffic on local streets.

Siting criteria for individual facilities are presented in the following sections of this Master Plan:

- a) Water Supply - Chapter Twelve: Potable Water Systems.
- b) Wastewater Treatment - Chapter Thirteen: Wastewater Treatment and Collection System.
- c) Storm Drainage - Chapter Fifteen: Storm Drainage and Flood Protection.
- d) Fire and Police Facilities - Chapter Six: Public Health and Safety.
- e) Municipal Services Maintenance Yard - Chapter Thirteen: Wastewater Treatment and Collection System.
- f) Neighborhood and Community Parks - Chapter Seven: Recreation and Open Space.
- g) Transportation - Chapter Nine: Transportation and Circulation.
- h) Schools and Library - Chapter Five: Education, Child Care and Libraries.
- i) Utilities - Chapter Eight: Energy and Telecommunications.

4.2.11 Gas and Electric Transmission Easements

Setbacks from gas and electric transmission easements are addressed in Chapter Eight: Energy and Telecommunications.

4.3 COMMUNITY EDGES

4.3.1 Community Edges

Mountain House is planned as a distinct new community that clearly separates the urban uses from surrounding agricultural and grazing uses. The edges of the community will consist of a variety of treatments creating a permanent boundary and buffer to the agricultural uses.

Figure 4.1: Community Edge Treatment Key Map identifies the location of various edge conditions around the community. Appendix 4-A: Mountain House Design Manual provides additional information on landscape treatments and plant palette.

Policies:

- a) Community edge treatments shall be utilized to establish a distinct boundary between Mountain House and surrounding land uses. The edge treatments shall be designed to buffer the potential adverse effects of the new urban community upon adjacent agricultural lands, and vice versa.
- b) Edge treatments shall be designed to respond to the unique site conditions between Mountain House and adjacent off-site uses. Edge boundary treatments shall be visually distinctive, and shall discourage access by vehicles and pedestrians to the agricultural uses. The portions of edge treatments located in different Specific Plan Areas shall be designed and constructed to be consistent with adjacent edge treatments. Specific Plans contiguous with previously developed areas shall utilize

the same design treatment as the previous Specific Plan. Modifications shall be limited to improved plant selection or other efforts to correct problems with existing edge treatments.

- c) Buffer areas and setbacks shall be no larger than necessary, and shall consist of usable, easily maintainable areas and treatments.
- d) Edge treatments shall be installed no later than at construction of adjacent roadways. In no case shall edge treatments be installed later than the development of adjacent land uses.
- e) Edge treatments shall include provisions for the conveyance of runoff from a 100-year flood event occurring from either upstream drainage facilities or from overland sheet flow.

4.3.2 West Edge Treatment

The community's west boundary encompasses a range of existing conditions, including non-irrigated farmland used for grazing in the southern portion, existing homes along Grant Line Road, irrigated farmland north of Mountain House Creek, and the Livermore Yacht Club and Del's Boat Harbor in the northernmost area.

The primary concern in these areas is the potential for conflicts between agricultural and urban land uses. In combination, the measures proposed for the west edge are intended to mitigate potential conflicts between agriculture and urban development to a level of insignificance, without creating other maintenance and ownership problems.

Policies

- a) Edge treatments along the west edge shall be designed to mitigate any potential impacts from aerial spraying.
- b) The treatment of the west edge shall consider the agricultural uses adjacent to the property and the proposed land uses within the community, and shall utilize a combination of elements appropriate to an urban/agricultural boundary condition. As appropriate, allowed uses along the west edge include:
 - Walls and fencing
 - Earthen berms
 - Bike lanes and pedestrian paths
 - Landscape planting
 - Major roadways
 - Local streets
 - Utility easements
 - Parking and storage within private lots
 - Private yard area



Community Edge Treatment Key Map

Community West Edge at Marina Boulevard

Figure 4.11 identifies this edge as Treatment 1, extending along the Alameda County line from Grant Line Road to the divergence of Marina Boulevard from Alameda County line (see Figure 4.2: Community West Edge at Marina Boulevard). The edge shall be a minimum of 210 feet in width.

- c) The treatment of this portion of the west boundary shall create an attractive and functional linear corridor, incorporating the following:
- Four lane, high speed roadway (Marina Boulevard), connecting Grant Line Road to Byron Road (minimum 110' right of way).
 - Evergreen windrow tree planting on both sides of the roadway and in the median, to create an attractive boundary, help screen spray and dust, and mitigate prevailing westerly winds.
 - Continuous multi-use path on the west side of the roadway.
 - Agricultural wire fencing at the edge of the property boundary.
 - Continuous screening shrubs planted along the fenced boundary.
 - Sound/privacy wall planted with vines and screening shrubs along residential property lines on the east side of the roadway.
 - 100-foot building setback (excluding garages and accessory structures) from the eastern right of way line of Marina Boulevard to the nearest dwelling (minimum 210 feet to community boundary).

Community West Edge at Residential

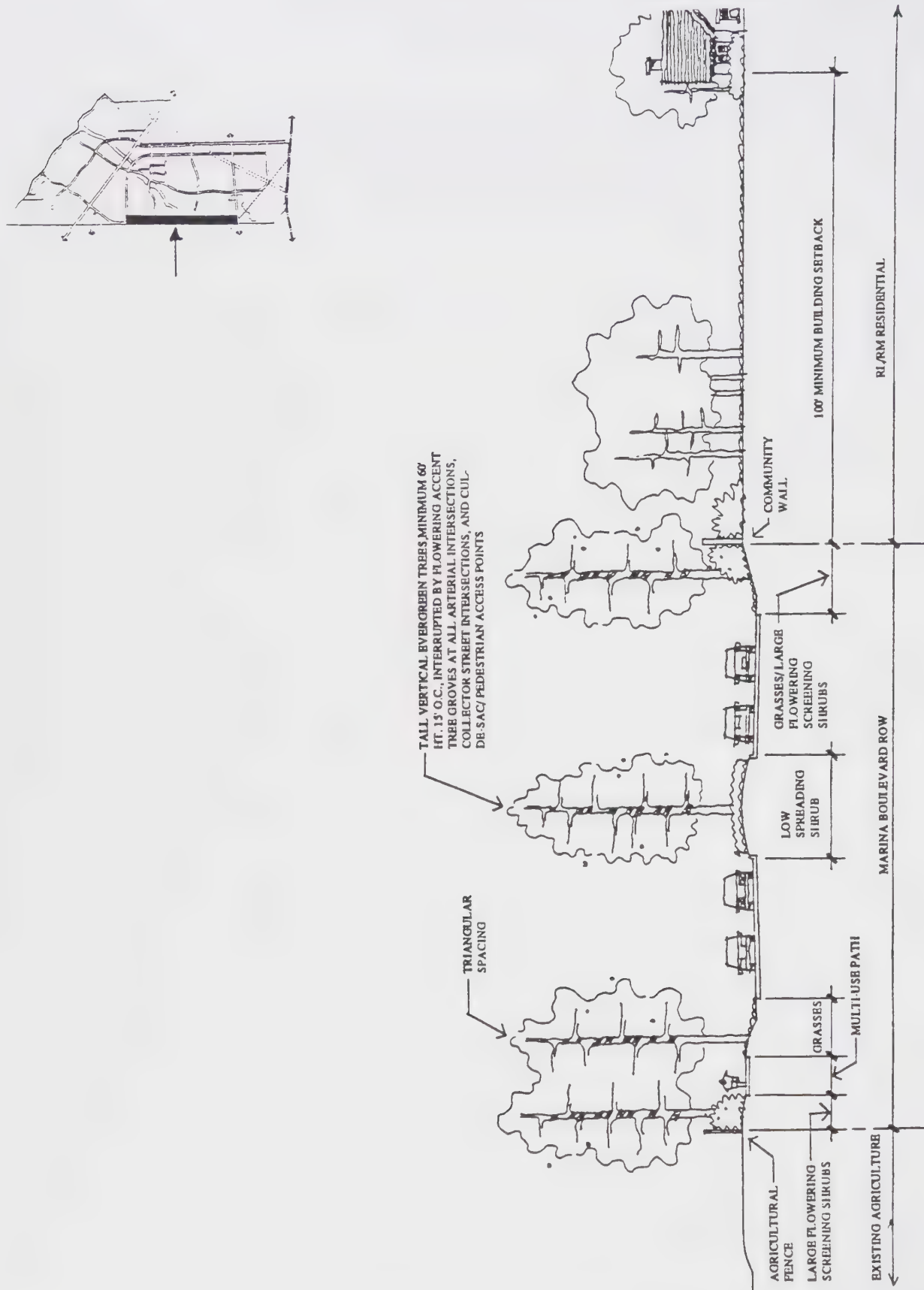
Figure 4.1 identifies this edge as Treatment 2, extending along the west edge where residential uses directly abut the County line. This condition includes two alternatives: where residential backs onto the community edge, and where a road fronts onto the community edge (see Figure 4.3: Community West Edge at Residential). This edge shall be a minimum of 100 feet in width.

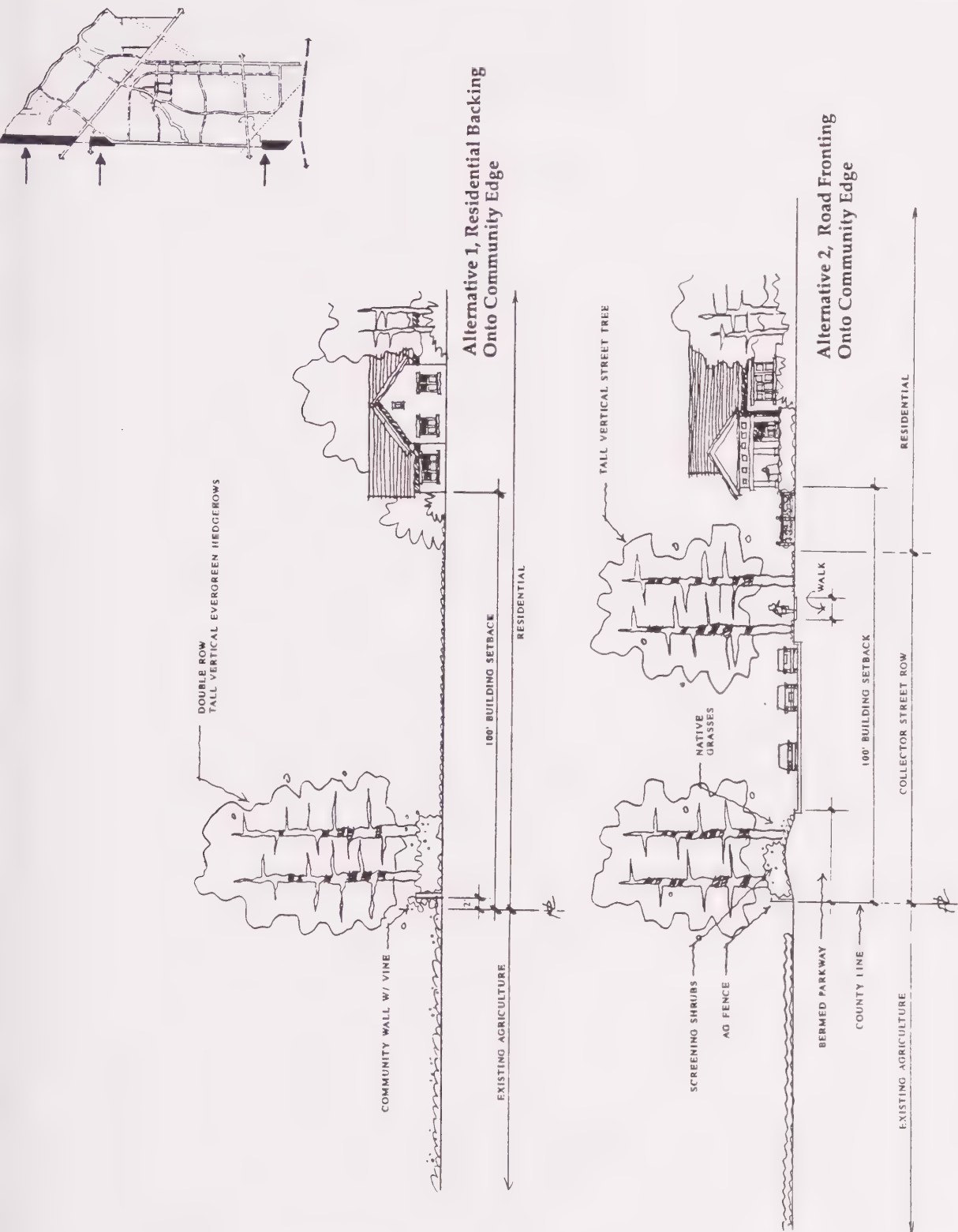
- d) Residential uses immediately adjacent to the Alameda County Line shall incorporate the following:
- Minimum 100-foot setback from the community boundary to the nearest dwelling, the setback occurring within the rear yard of the residential properties.
 - Continuous security fence or wall along the property line planted with vines.
- e) As shown on Figure 4.3, an alternative to the above edge treatment shall consist of:
- Minimum 100-foot building setback, excluding garages, from the community boundary to the nearest dwelling.
 - Setback area including a residential street, landscaping within the right of way, and front or side yard landscaping.

Community West Edge at General Commercial

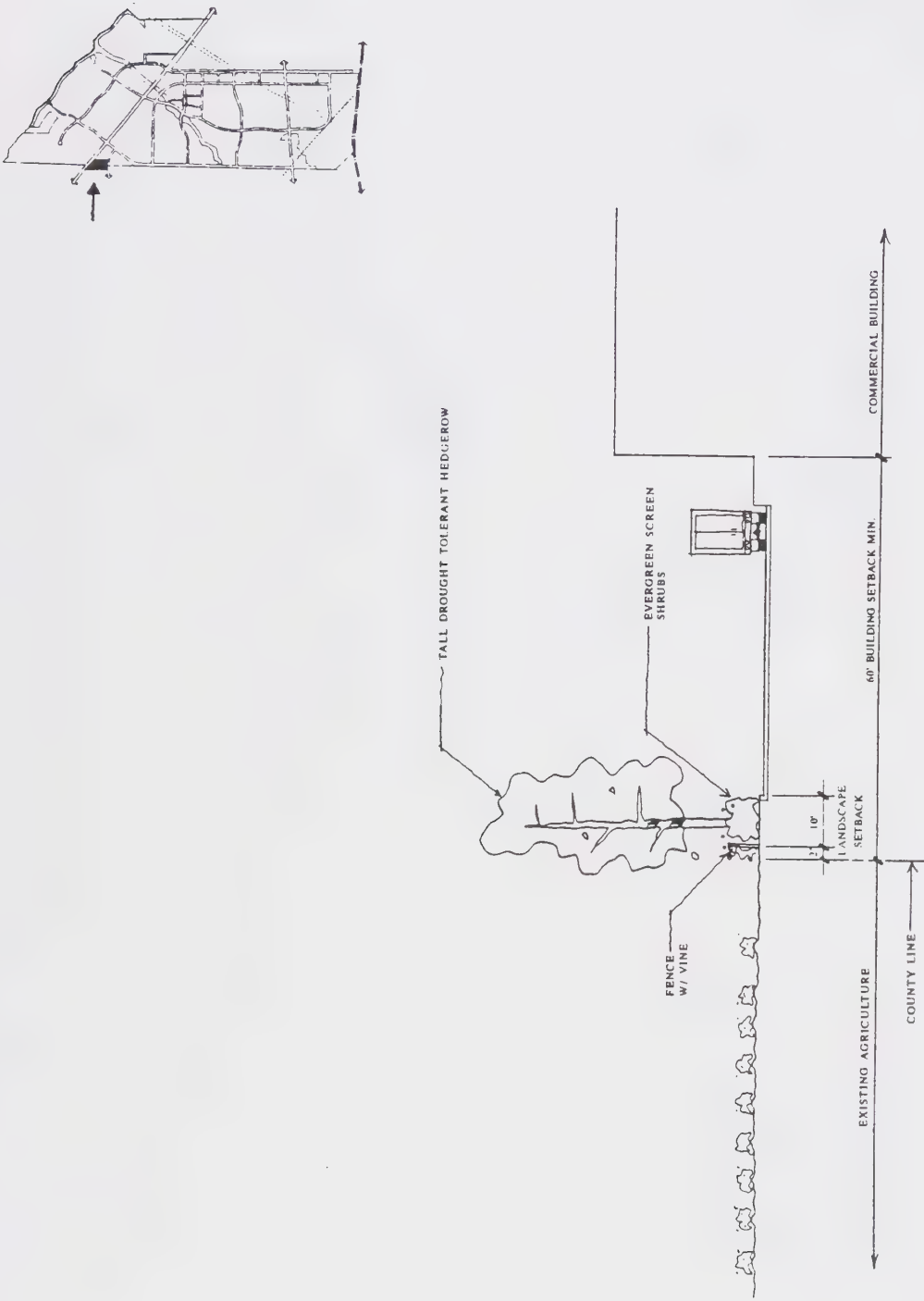
Figure 4.1 identifies this edge as Treatment 3, extending along the west edge where General Commercial uses directly abut the County line (see Figure 4.4: Community West Edge at General Commercial)

- f) The buffer between the General Commercial uses south of Byron Road shall consist of:
- A continuous wall or fence along the property line, planted with vines.
 - A 10-foot minimum landscape strip adjacent to the wall or fence planted with a row of vertical trees and large screening shrubs.
 - A minimum building setback of 60 feet.





Community West Edge
at Residential (Alternative 1 and 2)



4.3.3 East Edge Treatment

The east edge of the project area, between the freeway interchange and Byron Road, is defined by the existing Patterson Pass Road. Existing uses within and adjacent to this edge are farmland and scattered rural residential development. North of Byron Road, the east edge parallels the Southern Pacific railroad, Wicklund Road, and the Westside Irrigation Canal.

Community East Edge at Patterson Pass

Figure 4.1 identifies this edge as Treatment 4, extending along Patterson Pass Road from I-205 to Byron Road. Figures 4.5 to 4.9 illustrate this edge treatment.

- a) Land uses on the west side of Patterson Pass Road shall consist of commercial and industrial uses, with access from De Anza Boulevard or east-west cross streets.
- b) The eastern edge of the community shall consist of a linear corridor that serves both as a shallow storm water drainage channel and as a buffer to adjacent agricultural areas and as an important entry into the community. The corridor shall include:
 - A multiple lane, divided Arterial roadway replacing the existing Patterson Pass.
 - An open rail fence planted with vines along the property boundary.
 - Large, evergreen screening shrubs planted along the fence line.
 - An easement (width varies from 30 to 100 feet) for storm drainage paralleling the eastern property line.
 - Multiple rows of trees along both sides and the median and other landscaping.
 - A multi-use path along the west side of the roadway.
 - Buffers and required setbacks as described in roadway sections (see Chapter Nine: Transportation, Figures 9.21 to 9.25) and Table 4.1.
- c) Edge treatments shall be installed when any adjacent portion of Patterson Pass Road is improved and the storm channel improvements are installed.

Community East Edge at Byron Road

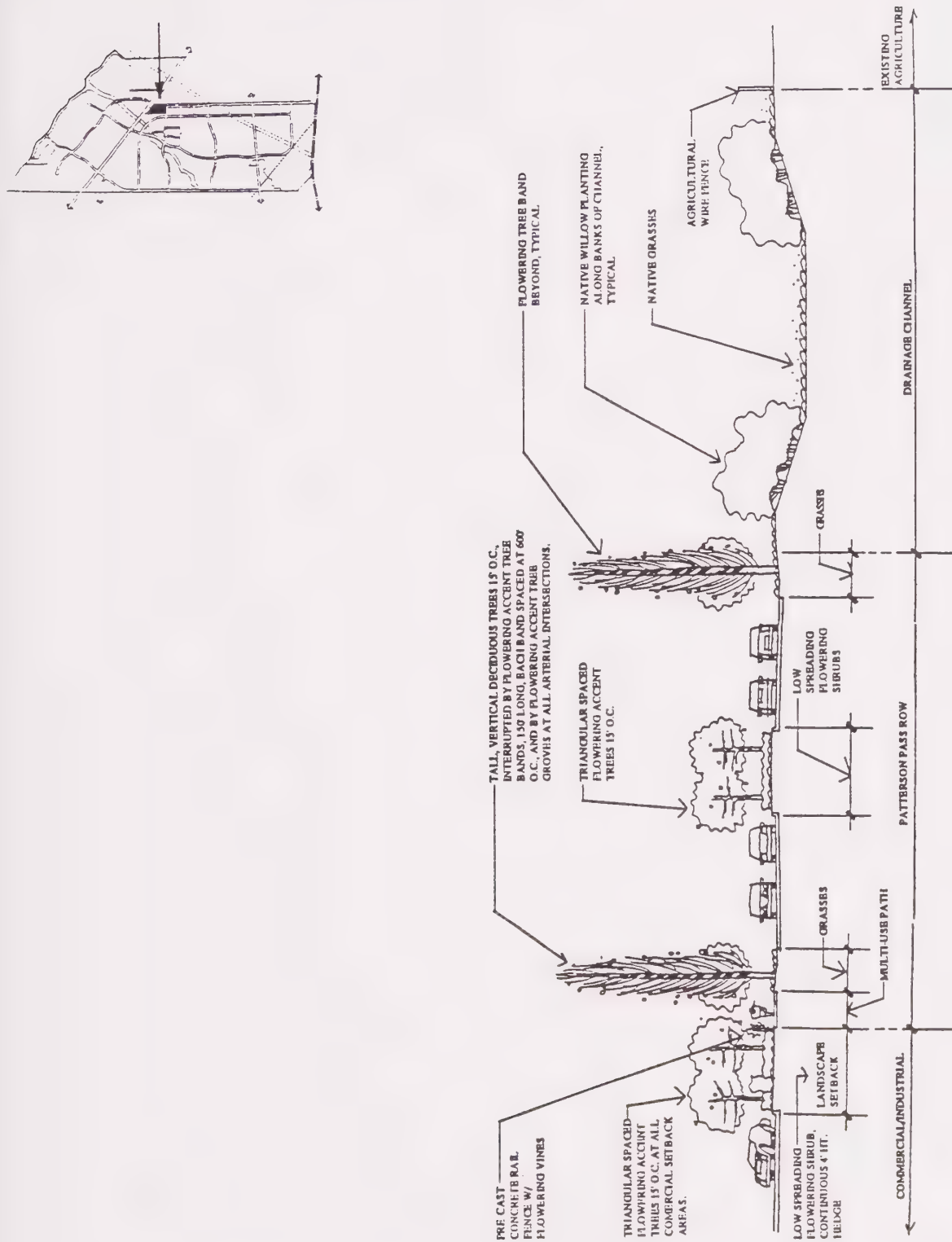
Figure 4.1 identifies this edge as Treatment 5, extending along Byron Road from Patterson Pass Road to Wicklund Road. Figure 4.10 provides an illustration of this edge treatment.

- d) Land uses on the north side of Byron Road shall consist of the Southern Pacific railroad right-of-way, with industrial uses further to the north. To the south will be continued agricultural uses outside the community.
- e) Byron Road shall be a six-lane Major Arterial in this area with a 122-foot right-of-way, 14-foot planted median, 12-foot planting areas and six-foot Class II bike lanes on each side, and a security fence along the north side. Combined with the 100-foot railroad right-of-way, this edge shall be a minimum of 222 feet.

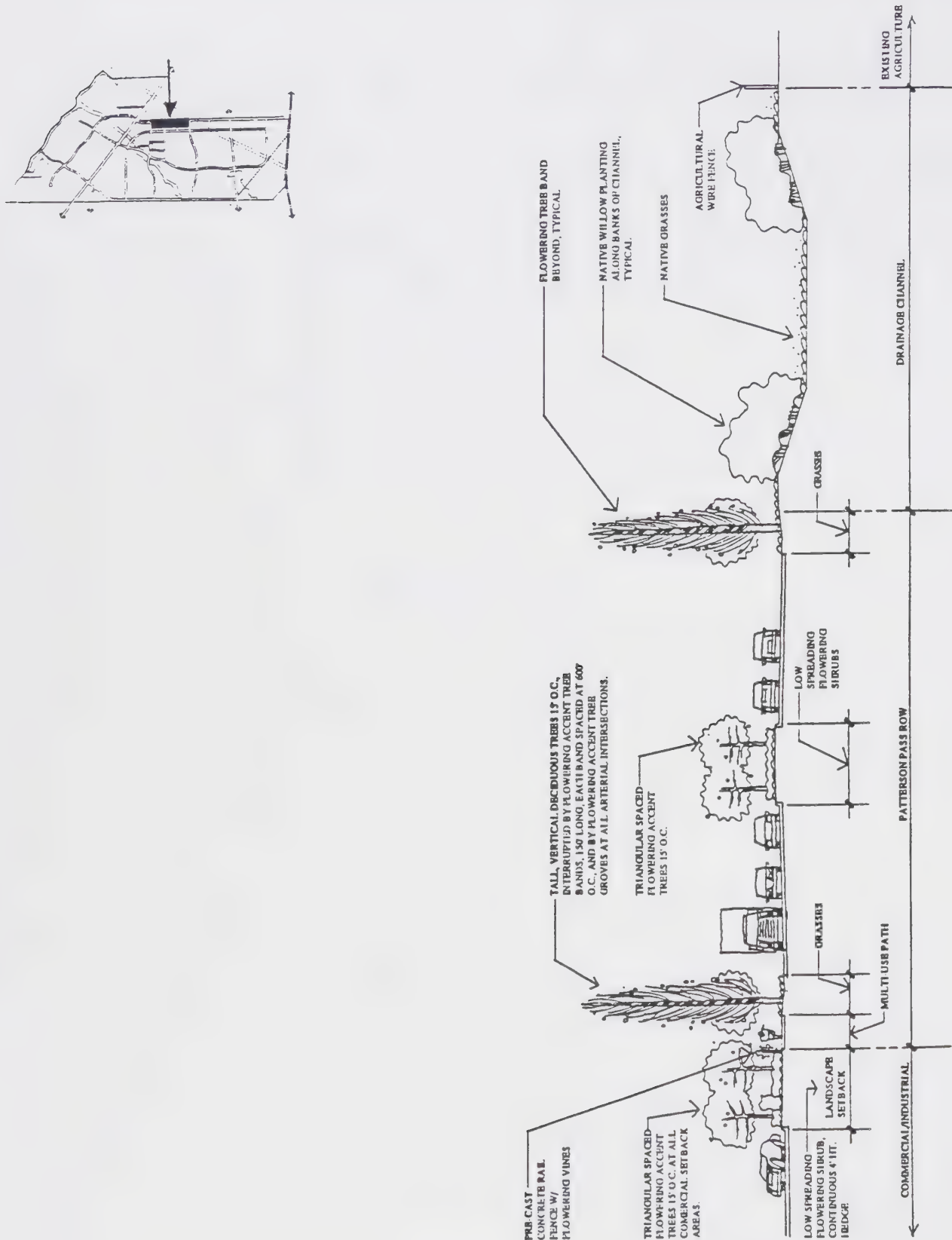
Community East Edge at Public Use/General Industrial

Figure 4.1 identifies this edge as Treatment 6, extending along the Westside Irrigation Canal from Byron Road to where the canal turns northeast to join Old River. Figure 4.11 provides an illustration of this edge treatment.

- f) Treatment of the wastewater treatment plant site and general industrial uses shall include:
 - A landscape buffer planted with tree windrows and large screening shrubs, west of the Irrigation Canal. The buffer shall occur within the required 10-foot parking setback or 15-foot building setback. (~~see Table 4.1: Lot and Structure Standards~~)
 - A fence along the property boundary.
- g) Treatment of the golf course edge shall include:
 - Extension of the Old River regional Park south from Old River to the open space wetlands immediately north of the wastewater treatment plant.

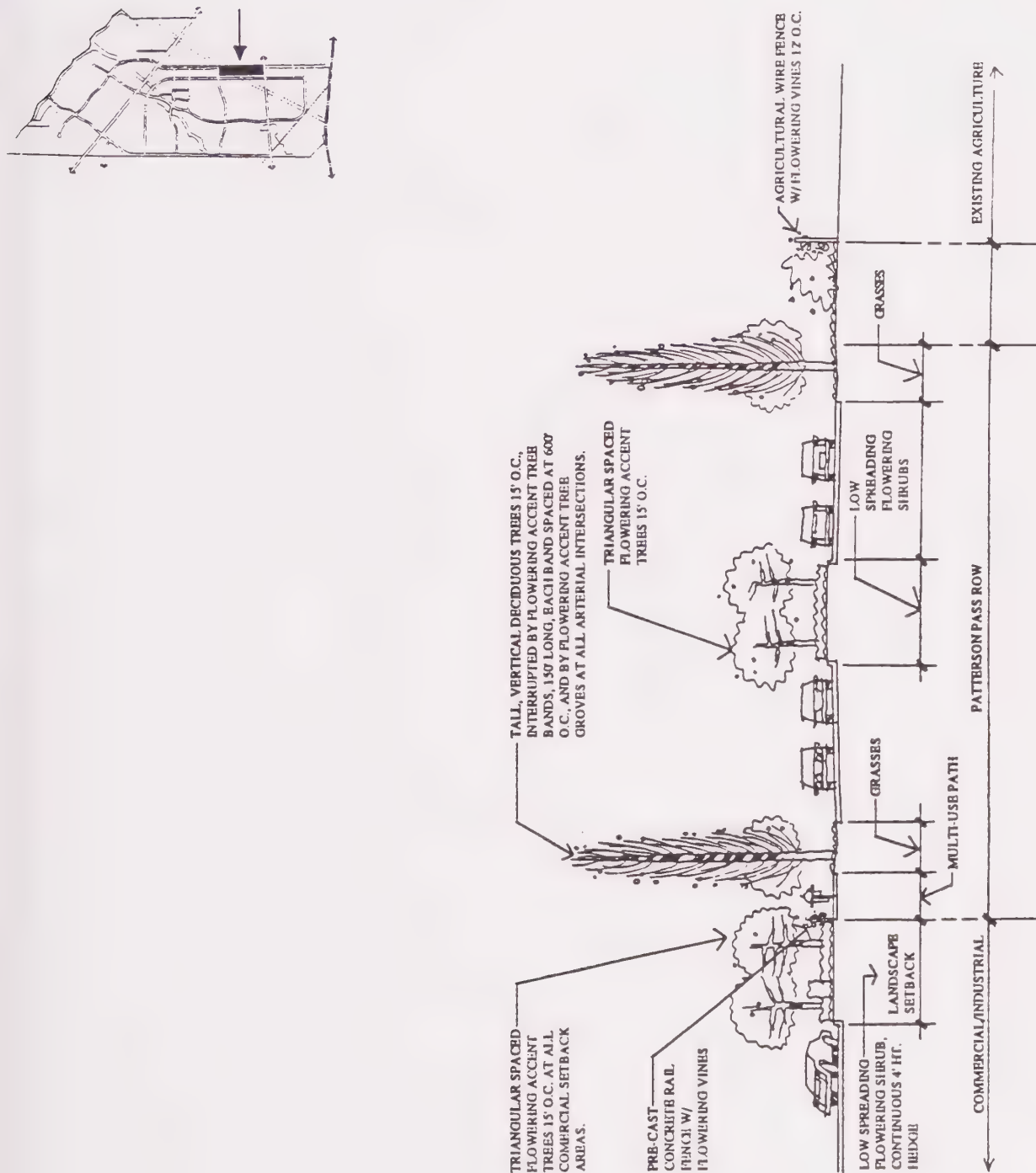


Community East Edge at Patterson Pass Road (Main Street to Byron)

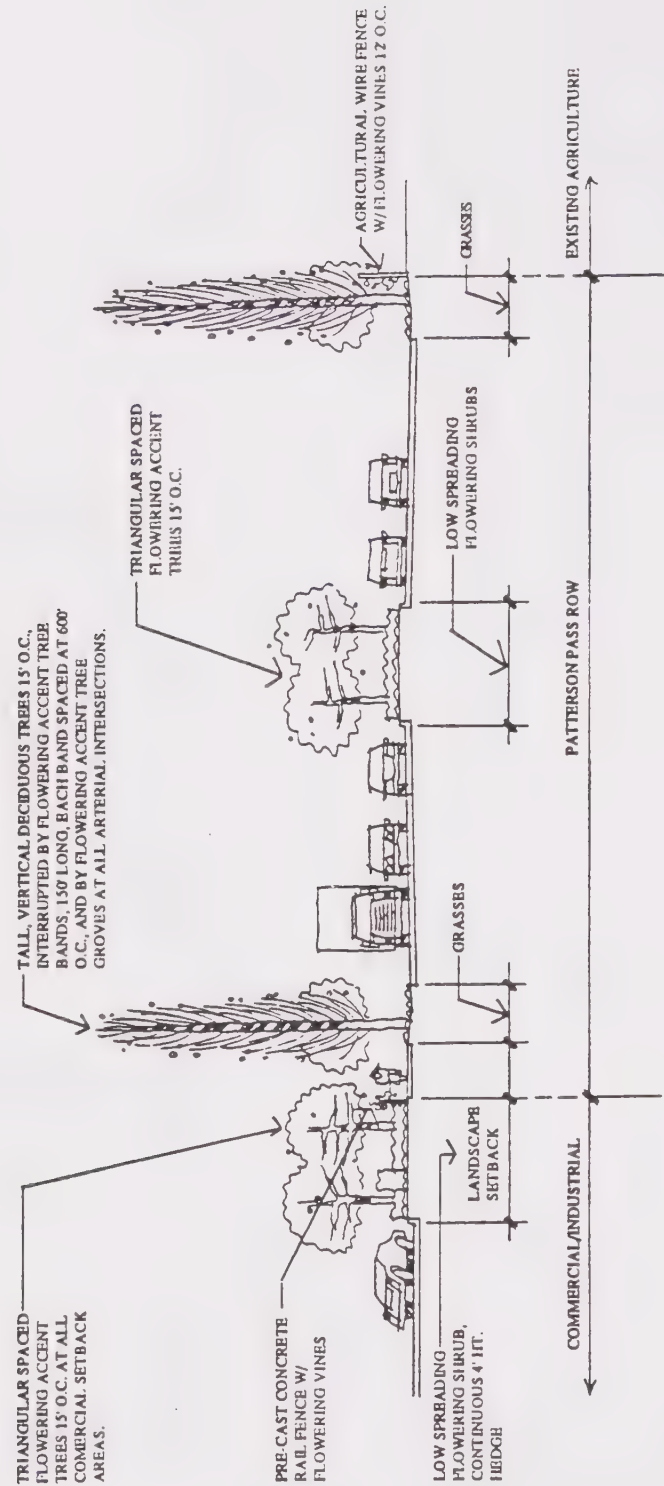
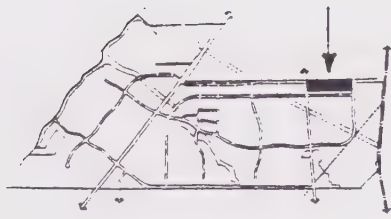


Community East Edge at Patterson Pass Road (Mascot Boulevard to Main Street)

Source: The SWA Group



Community East Edge at Patterson Pass Road (Grant Line Road to Mascot Boulevard)

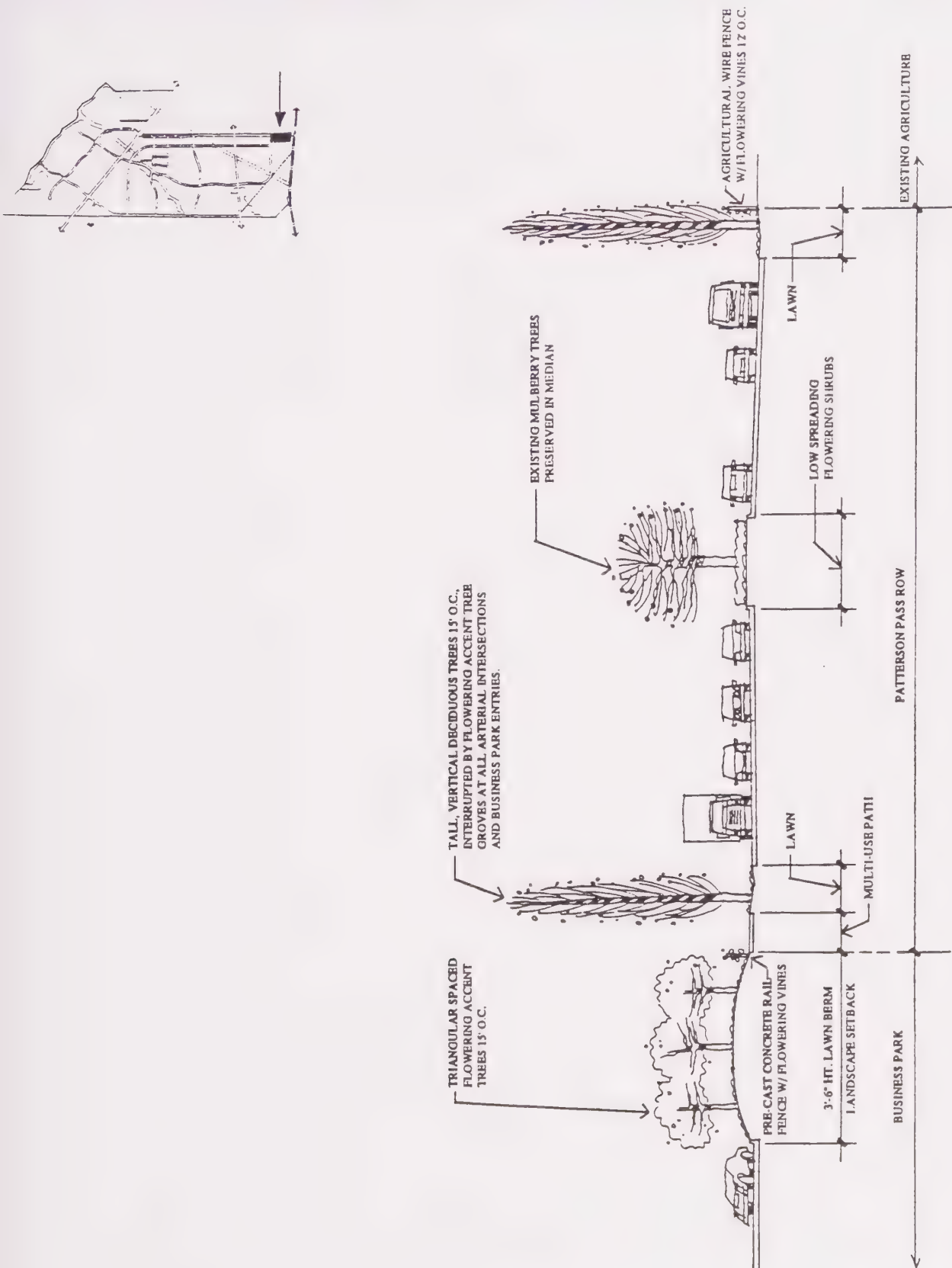


Community East Edge at Patterson Pass Road (Central Parkway to Grant Line Road)

Source: The SWA Group

September 16, 1994

Chapter Four: Development and Design

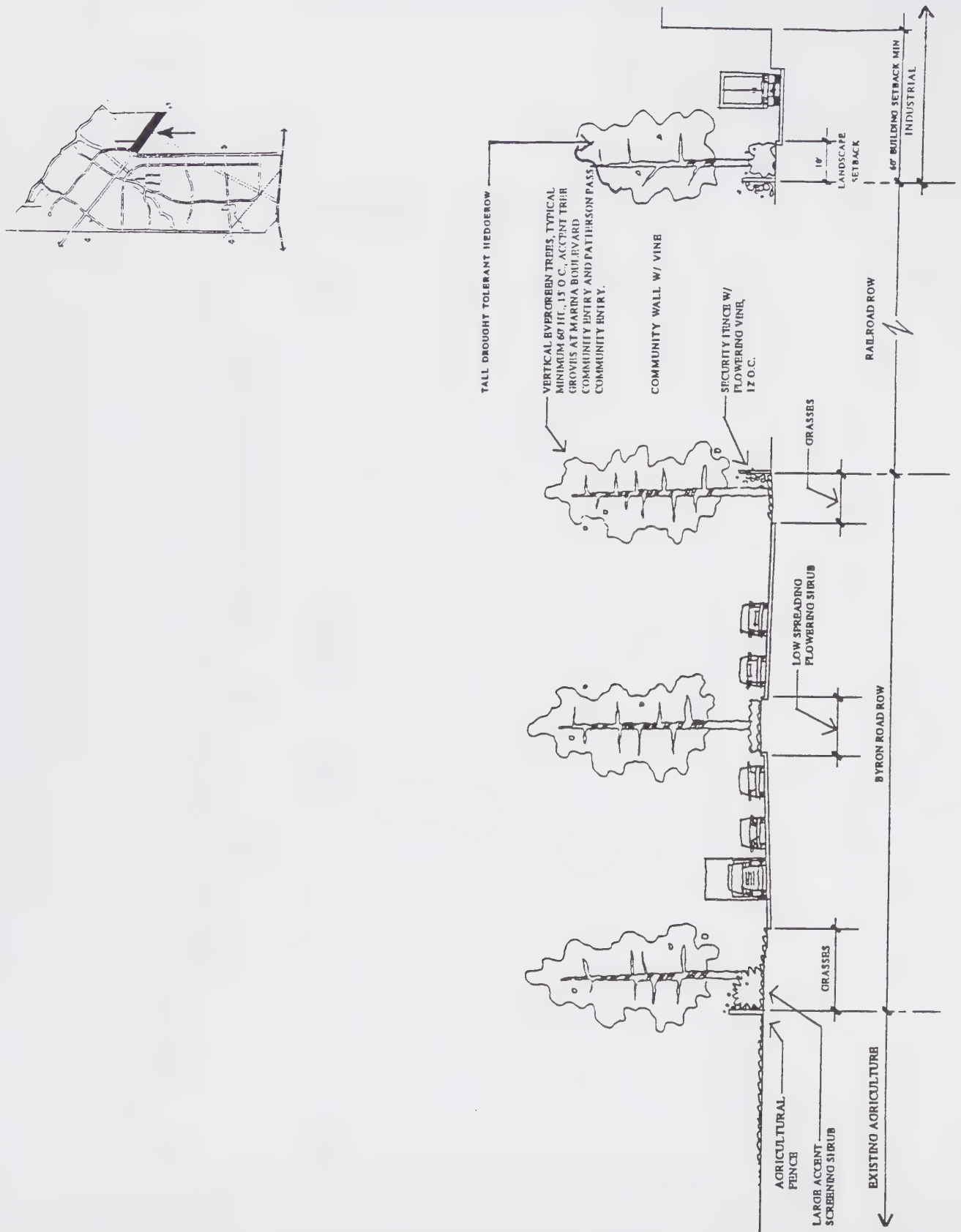


Community East Edge at Patterson Pass Road (I-205 to Central Parkway)

Source: The SWA Group

September 16, 1994

Chapter Four: Development and Design

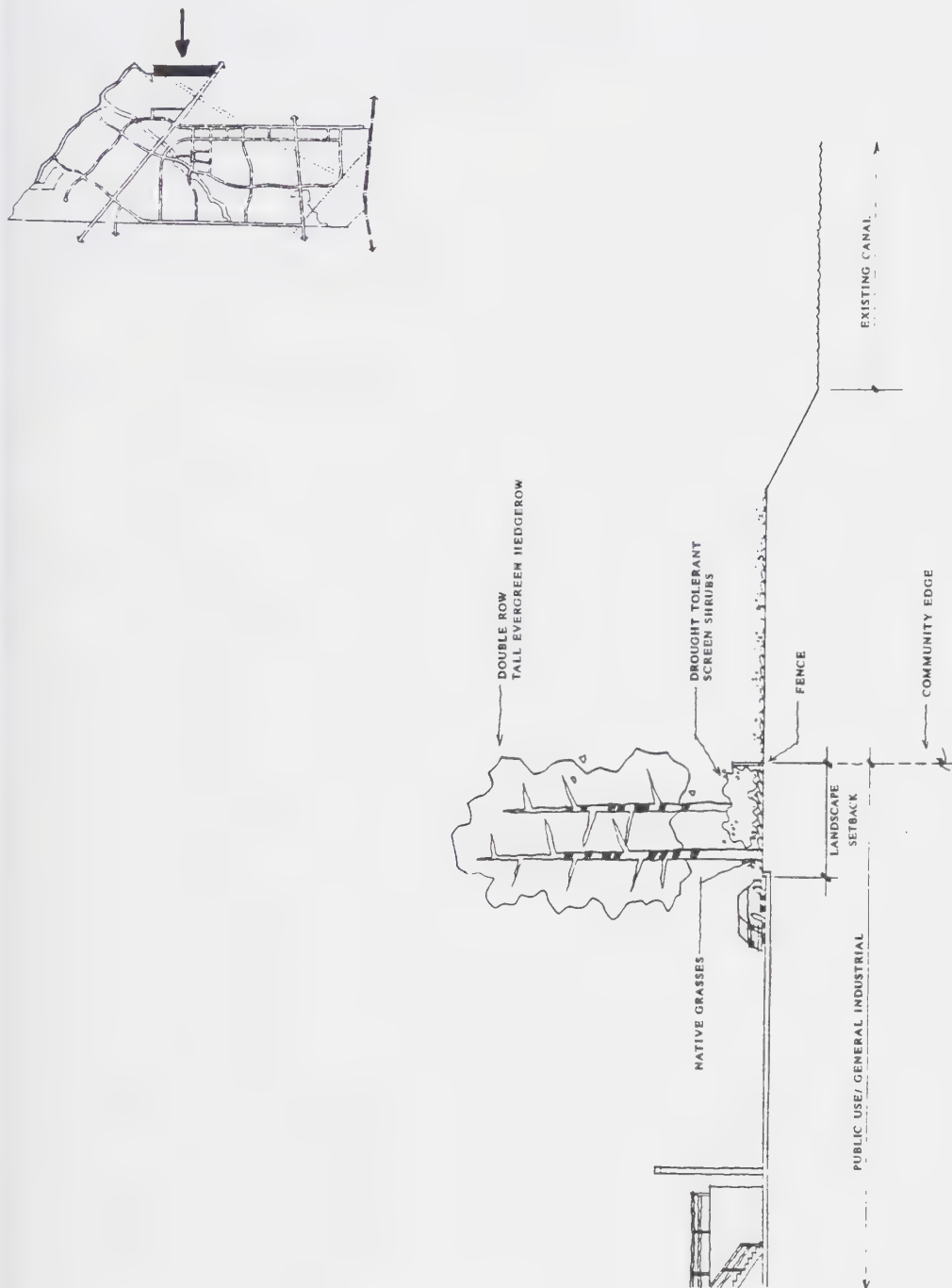


Community East Edge at Byron Road (Wicklund Road to Patterson Pass Road)

Source: The SWA Group

September 16, 1994

Chapter Four: Development and Design



Community East Edge at Public Use/ General Industrial

4.3.4 South/Freeway Edge Treatment

The southern edge of the community along I-205 will include a landscaped building setback. This setback is intended to buffer the visual impact of the new community as seen from the freeway, and to mitigate the impacts of freeway noise on adjacent residential land uses.

I-205 Edge at Business Park

Figure 4.1 identifies this edge as Treatment 7, extending along the I-205 frontage from Patterson Pass Road to the PG&E power line easement. This edge includes the freeway service commercial area adjacent to I-205. Figure 4.12: I-205 Edge at Business Park provides an illustration of this edge treatment.

- a) The landscape treatment shall serve as the visual edge of the community, and help establish the sense of arrival and identity from the freeway.
- b) The buffer area adjacent to the business park and commercial uses shall occur within the development area and shall include the following:
 - A 40-foot minimum private landscape setback adjacent to the freeway right of way, separating parking areas, drives and buildings from the freeway.
 - A security fence along the right of way.
 - Groves of trees planted within the setback, and extending through parking areas or other landscape areas within the parcel.
 - A broad, low berm to partially screen parking areas, yet allow views to buildings.
- c) Grading and landscaping shall be utilized to the extent possible to avoid sound walls along the freeway edge.
- d) ~~A monument identifying San Joaquin County shall be incorporated into the edge treatment.~~
- d) The buffer area shall be ~~fenced and closed to the public~~ designed and landscaped in a manner than discourages public access.
- e) Construction of the buffer shall be the responsibility of the business park developer and shall occur when building permits for the business park (including the freeway service commercial area) total 250,000 square feet. If the business park is not developed within a single Specific Plan, ~~or if portions of the business park are processed as an amendment to an earlier Specific Plan, then the later phase of development shall be subject to the same edge treatment requirements applied to the earlier development.~~ then the buffer shall be constructed in no more than two phases.

If the Freeway Service Commercial area develops before the business park, it shall be responsible for installation of the entire segment of the buffer area within Freeway Service designation at the time of its initial development.

I-205 Edge at Community Park/Residential

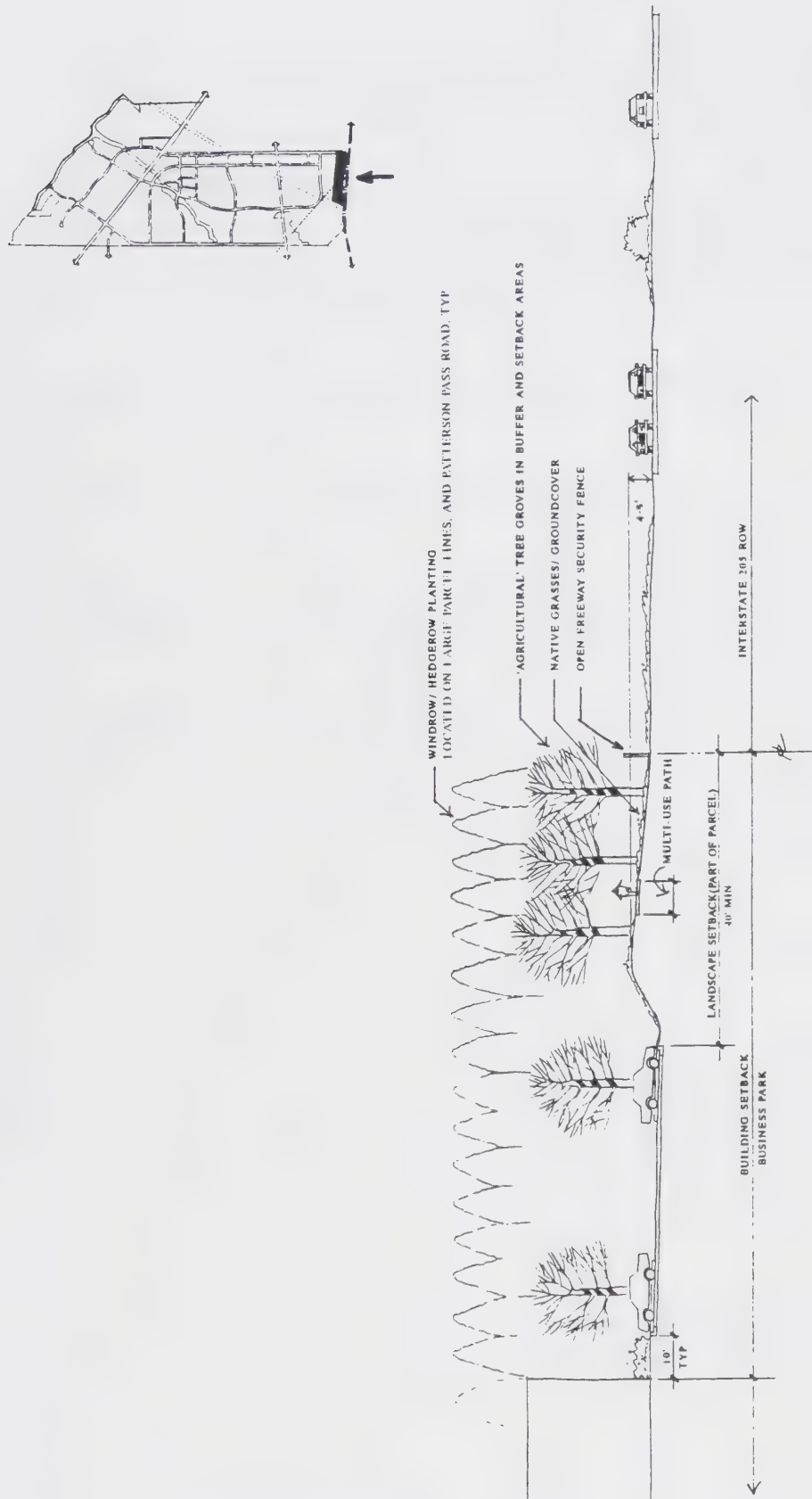
Figure 4.1 identifies this edge as Treatment 8, extending along the I-205 frontage from the PG&E easement to the southwest corner of the community. Figure 4.13: I-205 Edge at Residential provides an illustration of this edge treatment.

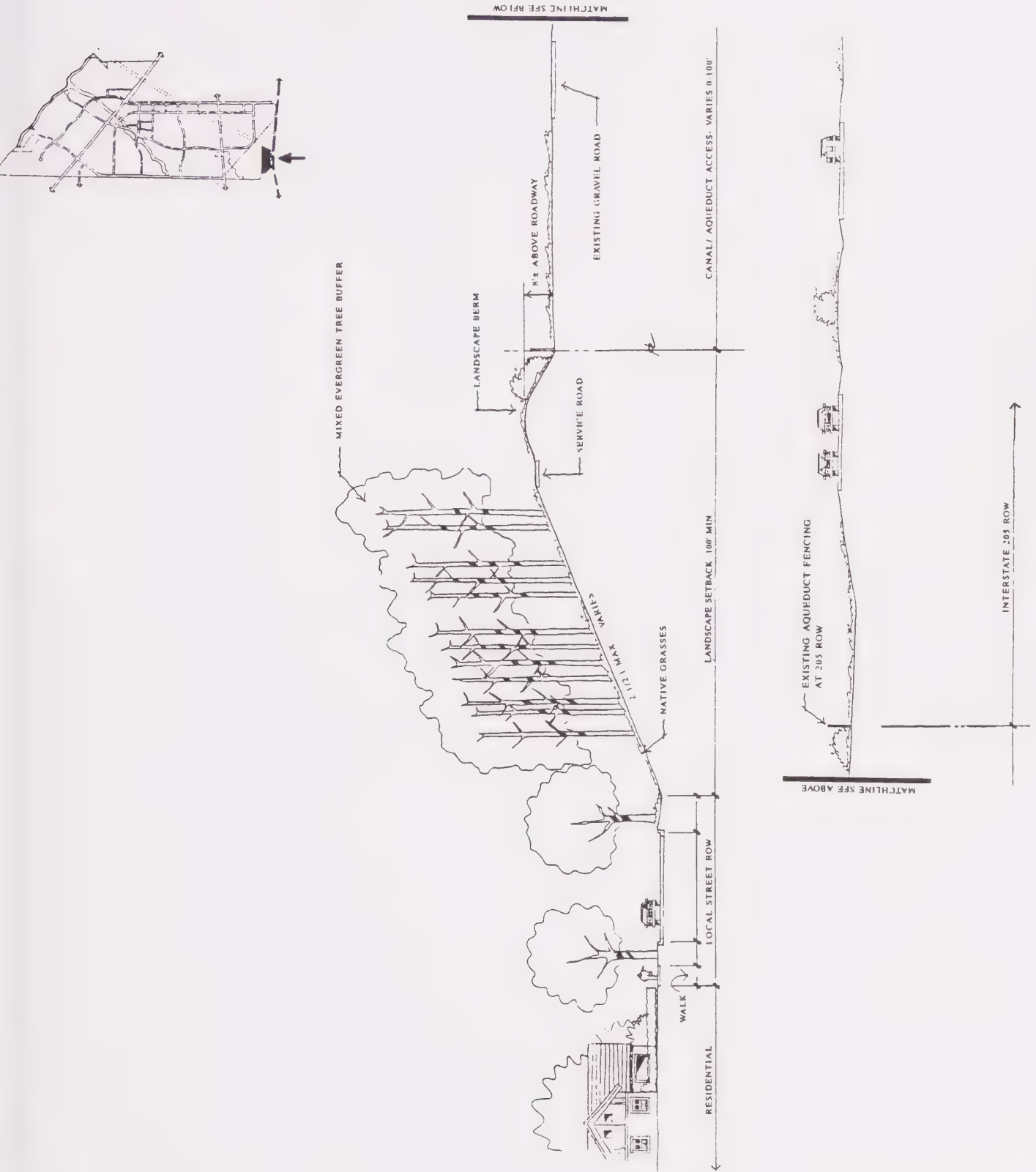
- g) At the western end of the freeway interface adjacent to residential areas, the landscape buffer shall include berms and planting within a 100-foot minimum landscape setback which, combined with the existing topography at the site, will help to mitigate noise impacts on nearby homes. This berm will require fill to a depth of approximately 30 feet to ensure slope stability and noise protection for the residential area.
- h) Grading and landscaping shall be utilized to the extent possible to avoid sound walls along the freeway edge (see Figure 4.13 and Appendix 4-A: Mountain House Design Manual).
- i) The buffer area shall be fenced and closed the public.

Community Southwest Edge at Residential

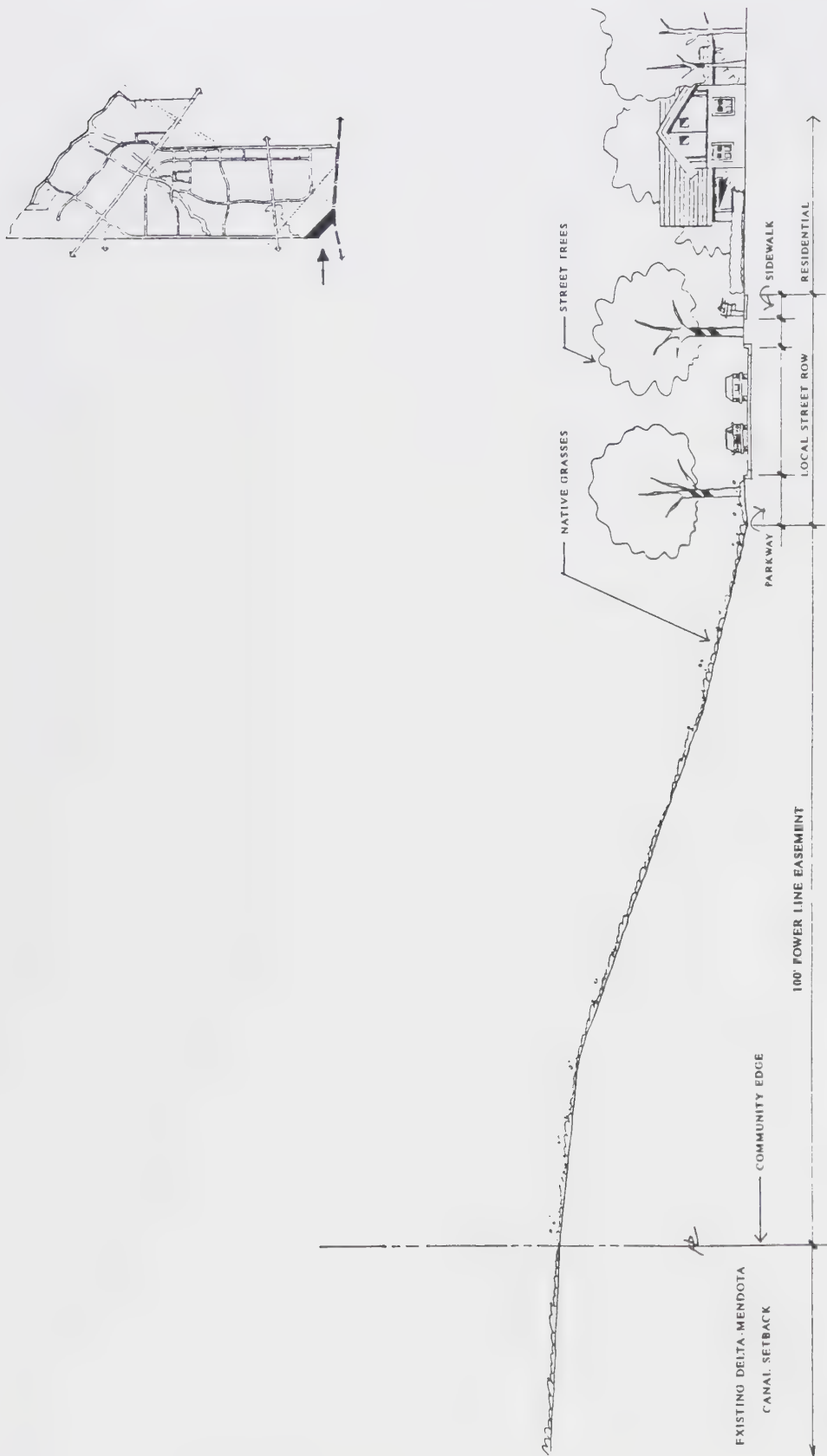
Figure 4.1 identifies this edge as Treatment 9, extending along the southwest corner of the community from I-205 to the County line. Figure 4.14: Community Southwest Edge at Residential provides an illustration of this edge treatment.

- j) At the southwest corner of the community, an existing slope up to the County line shall be utilized as a landscape setback. A local street may also be used to further separate residential uses from the community boundary.
- k) Installation of this edge treatment shall be the responsibility of individual developments located adjacent to the edge.





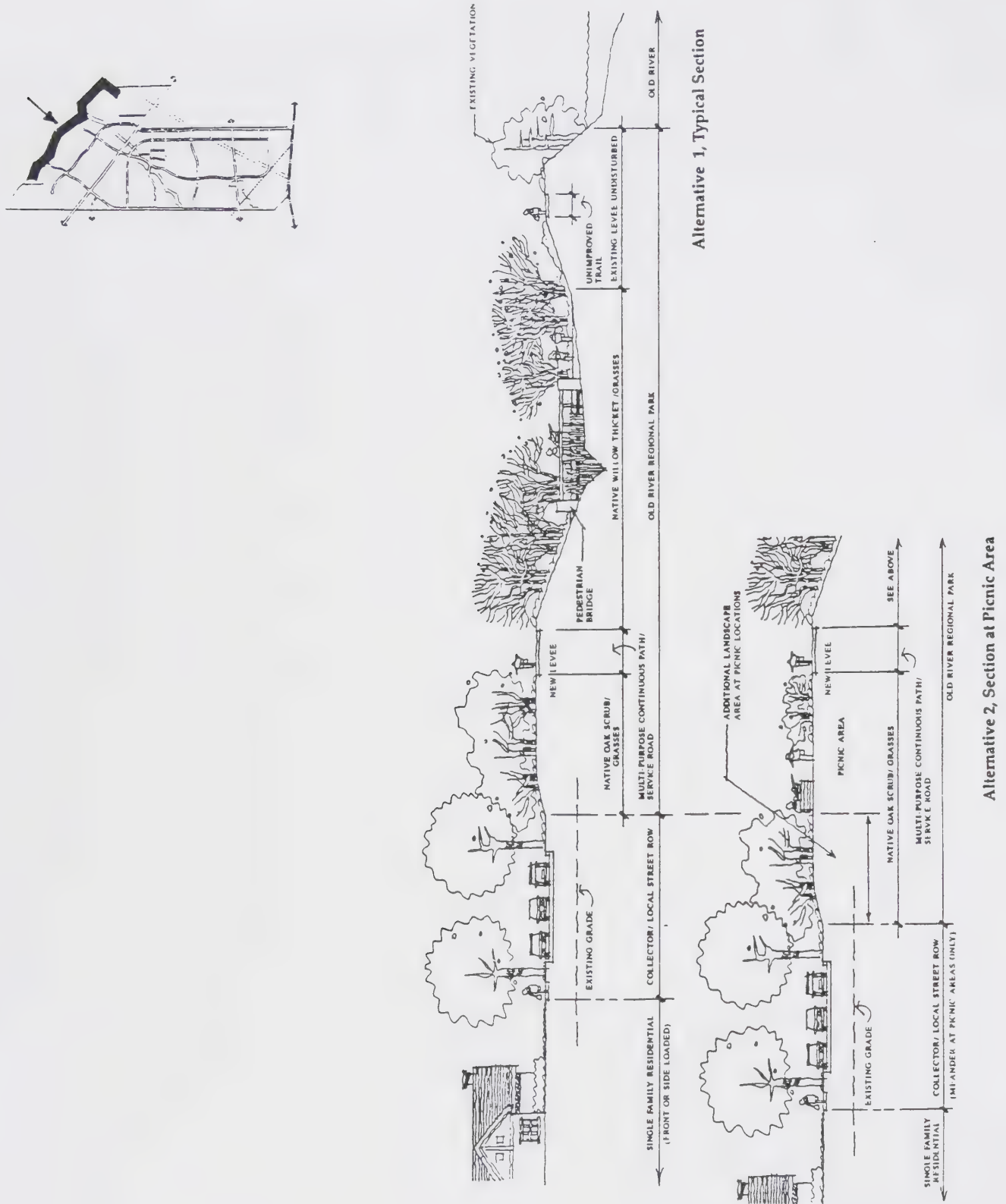
I-205 Edge at Residential



4.3.5 North Edge at Regional Park

Figure 4.1 identifies this edge as Treatment 10, extending along the Old River from the proposed marina to the proposed wastewater treatment area. Figure 4.15: Community North Edge at Regional Park provides an illustration of this edge treatment.

The Old River shall be bordered by a linear park as described in Chapter Seven: Recreation and Open Space.



4.4 LANDSCAPE CONCEPT AND POLICIES

The overall landscape concept for Mountain House is to create a distinctive, diverse environment that includes the developed and natural areas of the community.

Consistent treatment of all landscaped areas is critical to the creation of a high quality outdoor environment. Figure 4.16: Landscape Concept Plan identifies a number of significant components that, together, will result in a tree-covered landscape with a wide vegetative diversity.

In order to reinforce a distinct identity for each neighborhood, a single species of tree will be used on all Collectors within a single neighborhood. Landscape treatment of Local streets will utilize a variety of trees to identify localized areas. This approach will reinforce neighborhood identity and result in a wide variety of tree types on Arterials, Collectors, and Local roadways throughout the overall community.

Appendix 4-A: Mountain House Design Manual provides landscape architectural guidelines for roadways, gateways, and districts, and contains a plant list. The Design Manual also addresses standards for street tree planting along local roadways. Chapter Seven: Recreation and Open Space, addresses the treatment of Mountain House Creek, and Chapter Nine: Transportation and Circulation, includes figures illustrating landscape treatment of roadways.

Objective: To create a diverse, stable landscape environment in keeping with the agricultural and urban landscape patterns of the San Joaquin Valley.

Policies:

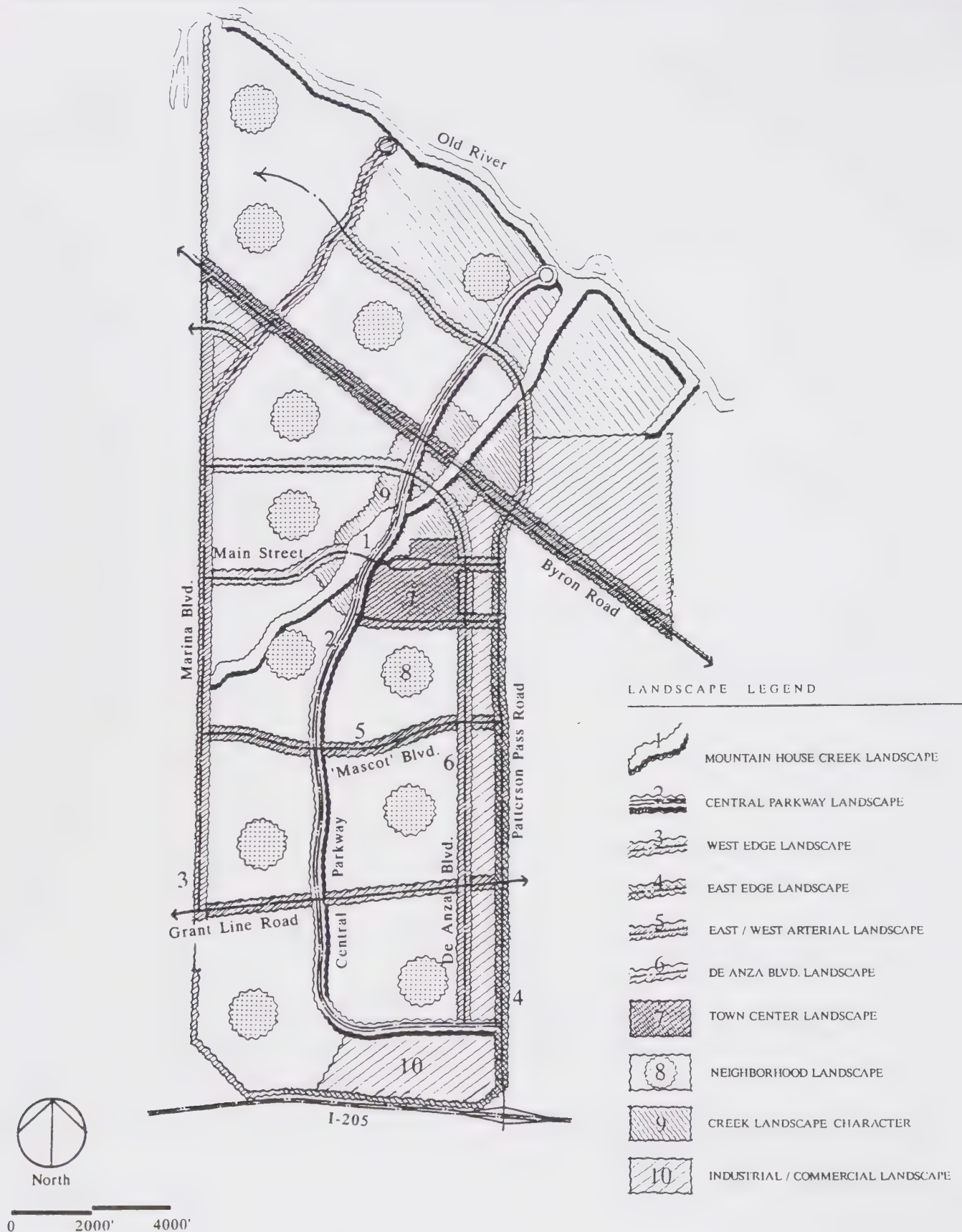
- a) Landscape design shall reinforce the distinct character of various site areas through the deliberate use of limited plant species. Each area or neighborhood as described by the Master Plan or Specific Plans should have a distinct landscape character, different from other areas.
- b) Landscape treatment of all areas shall emphasize the planting of tree-shaded corridors, contrasted with the community open spaces of the schools, parks, golf course and portions of Mountain House Creek.
- c) Each neighborhood, the Town Center and other districts as identified by Specific Plans shall have a distinct landscape character.
- d) Landscape design shall emphasize the planting of long-lived plant species that are native to the region or well-adapted to the climatic and soils conditions of the site. Landscape improvements shall require minimal maintenance and irrigation, and the use of native and drought tolerant plant materials shall be maximized.
- e) Landscaping shall emphasize consistent treatment of linear elements throughout the community, including streets, community edges, and riparian corridors. Linear elements shall be consistent between areas developed as part of different Specific Plans. Specific Plans contiguous with previously developed areas shall utilize the same design treatment as the previous Specific Plan. Modifications shall be limited to improved plant selection or other efforts to correct problems with existing landscape treatments.
- f) Landscape treatments shall incorporate colorful plant material and evergreens in areas where such accents are appropriate.

- g) View corridors towards the foothills and Mount Diablo shall be protected and enhanced to the greatest extent possible without compromising the ability of the windrows planted along the western boundary to mitigate wind, dust and aerial spraying.

Implementation:

- a) Mountain House Design Manual. A Mountain House Design Manual shall be approved prior to submittal of any the first Development Permit. The Design Manual shall address landscape guidelines for overall community landscape, streets, gateways and entries, residential neighborhoods, Town Center, neighborhood centers and high schools, creek area, commercial and industrial uses, parking lots, and community windbreaks. The Manual shall also contain a plant list for the overall community.
- b) Specific Plan Landscape Provisions. Each Specific Plan shall describe any additional landscape provisions not covered by the Design Manual and applicable only to that Specific Plan Area, including tree selection for Collector streets, designated accent trees for each neighborhood, and typical design of entries including species and placement.
- c) Focus Areas. Special Purpose Plans for the focus areas such as the Neighborhood Centers, Village Centers, Freeway Commercial area, and Central Commercial area shall describe a comprehensive landscape treatment for the subject area. Such landscape treatment shall be coordinated with architecture, lighting, signage, and site furnishings. Special Purpose Plans shall be approved prior to approval of the first Development Permit for the focus area (see Chapter Seventeen: Implementation).
- d) Plant Material Selection. Plant materials for public areas, roadways, commercial uses and industrial areas shall be selected from the Mountain House Plant List (see Appendix 4-A: Mountain House Design Manual). Except for plant species designated for community wide corridors such as Arterials and community edges, each Specific Plan may amend the plant list included in the Design Manual to include lists of additional approved plant species.
- e) Arterial Street Landscape Installation. Landscaping of Arterial streets as described in the Design Manual shall be installed by the CSD no later than the development of adjacent land uses.
- f) Local and Collector Street Landscape Installation. Landscaping of Collector and Local streets shall be installed by the developer concurrent with the development of adjacent land uses.
- g) Entry Landscape Installation. Landscaping of Community and Neighborhood Entries shall be installed by the CSD concurrent with the landscaping of adjacent Arterial streets.
- h) Roadway Landscape. Landscaping plans that include fencing, trails, sidewalks, bikeways and a conceptual layout of plant (trees, shrubs, etc.) species and sizes for both existing and proposed roadways of Collector classification and above, and other edge treatments shall be included in each Specific Plan.
- i) Specific Plan Landscape Provisions. The landscaping plans included in each Specific Plan shall be used as criteria by the Community Review Board to review the design and landscaping plans of all major projects within the community prior to construction.
- j) Identification of View Corridors. Critical view corridors shall be identified in the Parks and Open Space Plan.

- k) View Corridors. East-west roadways and pedestrian corridors throughout the project site should consider views of the hills to the west and, whenever feasible, the trees shall be planted to allow open views. Periodic breaks in the continuous landscaping plans for north-south Arterials and other roadways should be identified to maximize views toward Mount Diablo and the foothills.



4.5 SPECIFIC PLAN REQUIREMENTS

The following is a compilation of all Specific Plan requirements contained in this chapter.

- a) Grading Requirements for Specific Plans. All Specific Plans shall provide typical grading details and grading concepts for any special conditions unique to the particular Specific Plan area or amendment area and not addressed by this Master Plan. Such conditions are expected to include areas along the Old River and within Neighborhood A.
- b) Specific Plan Sign Provisions. Each Specific Plan shall describe any additional provisions for signage not covered by the Design Manual and applicable only to that Specific Plan Area.
- c) Specific Plan Lighting Provisions. Each Specific Plan shall describe any additional provisions for lighting not covered by the Design Manual and applicable only to that Specific Plan Area.
- d) Specific Plan Fencing and Walls Provisions. Each Specific Plan shall describe any additional provisions for fencing and walls not covered by the Design Manual and applicable only to that Specific Plan Area.
- e) Town Center Public Art. The Town Center Specific Plan shall include provisions for public art.
- f) I-205 Buffer. Construction of the I-205 buffer shall be the responsibility of the business park developer and shall occur when building permits for the business park (including the freeway service commercial area) total 250,000 square feet. If the business park is not developed within a single Specific Plan, then the buffer shall be constructed in no more than two phases. If the Freeway Service Commercial area develops before the business park, it shall be responsible for installation of the entire segment of the buffer area within Freeway Service designation at the time of its initial development.

~~If the business park is not developed within a single Specific Plan or if portions of the business park are processed as an amendment to an earlier Specific Plan, then the later phase of development shall be subject to the same edge treatment requirements applied to the earlier development. The buffer shall be constructed in no more than two phases.~~
- g) Edge Treatments/Linear Landscape Elements. Linear landscape elements shall be consistent between areas developed as part of different Specific Plans. The portions of edge treatments located in different Specific Plan Areas shall be designed and constructed to be consistent with adjacent edge treatments.
- h) Landscape Provisions. Each Specific Plan shall describe any additional landscape provisions not covered by the Design Manual and applicable only to that Specific Plan Area, including tree selection for Collector trees, designated accent trees for each neighborhood, and typical design of entries including species and placement.
- i) Entry Landscape Installation. Landscaping of Community and Neighborhood Entries shall be installed by the CSD concurrent with the landscaping of adjacent Arterial streets.
- j) Roadway Landscape. Landscaping plans that include fencing, trails, sidewalks, bikeways and a conceptual layout of plant (trees, shrubs, etc.) species and sizes for both existing and proposed roadways of collector classification and above, and other edge treatments shall be included in each Specific Plan.

- k) Criteria for Landscape Design. The landscaping plans included in each Specific Plan shall be used as criteria by the Community Review Board to review the design and landscaping plans of all major projects within the community prior to construction.
- l) Plant List Amendments. Except for plant species designated for community-wide corridors, each Specific Plan may amend the plant list included in the Master Plan (Appendix 4-A), to include lists of additional approved plant species.

Public Services

CHAPTER FIVE



EDUCATION, CHILD CARE AND LIBRARY SERVICES

CHAPTER FIVE: EDUCATION , CHILD CARE AND LIBRARY SERVICES

5.1	EDUCATION	1
5.1.1	Introduction	1
5.1.2	Assumptions	1
5.1.3	School Facilities	2
5.1.4	School Siting Criteria	6
5.1.5	School Support Facilities and Services	8
5.1.6	Integration of School and Community Facilities	9
5.2	CHILD CARE FACILITIES	9
5.3	LIBRARY SERVICES	10
5.4	PHASING AND COSTS	11
5.4.1	School Phasing	11
5.4.2	Library Phasing	12
5.4.3	Capital Facility Costs	13
5.4.4	Operations and Maintenance	13
5.5	SPECIFIC PLAN REQUIREMENTS	14

List of Figures

Figure 5.1: Typical K-8 School and Neighborhood Park	3
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List of Tables

Table 5.1: Student Generation	1
Table 5.2: K-8 Students at Neighborhood Buildout	2

CHAPTER FIVE: EDUCATION , CHILD CARE AND LIBRARY SERVICES

5.1 EDUCATION

5.1.1 Introduction

This section describes the objectives, policies and programs related to the provision of school facilities and services for kindergarten through twelfth grade. Chapter Three: Land Use, also contains provisions relating to schools.

5.1.2 Assumptions

- a) **Serving School Districts:** The serving school districts for the Master Plan are Lammersville Elementary School District for grades K-8 and Tracy Joint Union High School District for grades 9-12. The Master Plan utilizes the current districts' grade structure of K-8 elementary schools and 9-12 high schools.
- b) **School Construction/ Availability:** The School Districts will provide the schools as needed. Interim facilities at existing schools will also be provided before the first on-site schools are completed.
- c) **Student Generation:** Table 5.1: Student Generation, and Table 5.2: K-8 Students at Neighborhood Buildout show the assumed student generation per dwelling unit and the ultimate number of students at buildout for each of the Master Plan residential land use designations. The generation rates used were provided by the School Districts with the exception of the K-8 rates for Medium High and High Residential densities. Based upon comparison with other districts, these rates have been estimated at 50% of the medium and low density generation rates.

Table 5.1: Student Generation						
Master Plan Residential Land Use Designation	Average Units per Acre	Dwelling Units at Buildout	K-8 Students per Unit	K-8 Students at Buildout	9-12 Students per Unit	9-12 Students at Buildout
RVL •Very Low	1.08	82	0.676	55	0.300	25
RL •Low	4.50	4,882	0.676	3,300	0.300	1,465
RM •Medium	7.10	8,217	0.676	5,555	0.300	2,465
RMH •Medium High	12.00	1,914	0.338	647	0.240	459
RH •High	18.00	549	0.338	186	0.219	120
M/X •Town Center		200	0.338	68	0.219	44
Senior Housing		255	0	0	0	0
Totals		16,105		9,811		4,578

3/10/94

Table 5.2 shows the K-8 student generation at buildout of each of the twelve residential neighborhoods lettered A through L.

Table 5.2: K-8 Students at Neighborhood Buildout												
Neighborhood	A	B	C	D	E	F	G	H	I	J	K	L
K-8 Students	797	752	819	765	855	867	825	856	793	842	783	858

3/10/94

- d) Role of the CSD: While all Master Plan school facility plans and requirements recognize require the final approval authority of the School Districts, it is intended that CSD play a supporting and assisting role where feasible.

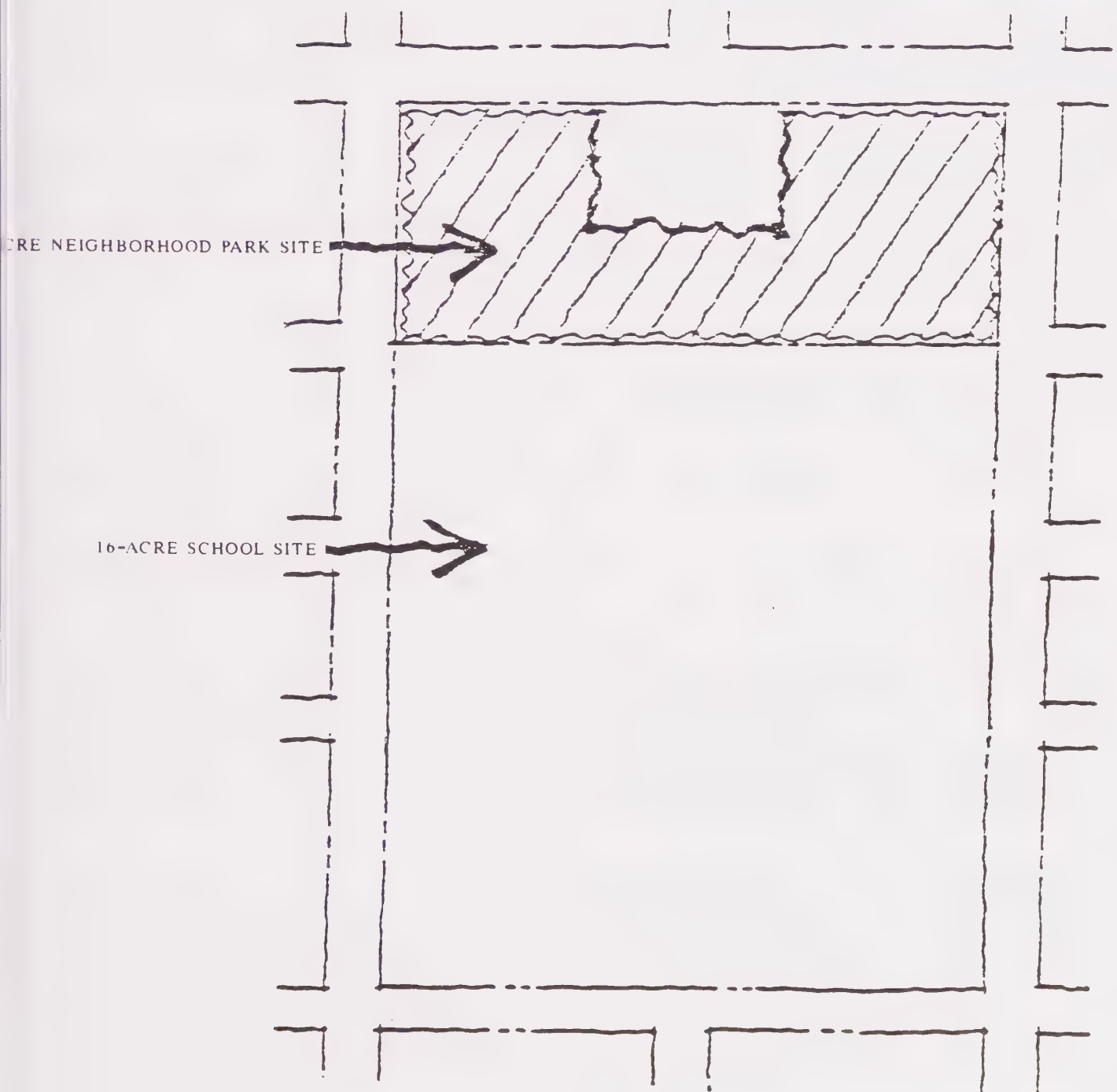
5.1.3 School Facilities

The following section describes provisions for the planning and provision of adequate and safe school facilities and services based upon State, County and School District standards (see Figure 5.1: Typical K-8 School and Neighborhood Park).

Objective: To ensure the adequate number, student capacity, acreage, and configuration of new K-8 and 9-12 school facilities.

Policies:

- a) A sufficient number of school sites shall be designated to meet State and School District criteria for capacity, location, acreage, shape, access, and surrounding land use.
- b) Twelve K-8 schools shall be sited to serve the 12 proposed neighborhoods.
- c) Two high schools shall be sited to provide efficient access to all portions of the community and serve the expected distribution of high school students.
- d) Within each Neighborhood Center, the K-8 school shall be located as far as practical from the Neighborhood Commercial area. The core facilities and classrooms shall be separated from commercial areas using playfields and park uses as a buffer. Access to school and commercial uses shall be from different streets. In addition, there shall be no direct pedestrian access between the school site and the Neighborhood Commercial.
- e) Each new K-8 school shall have shared use of an adjacent 2.4 acres of neighborhood parkland for athletic fields. The neighborhood park shall be designed to maximize joint use between the school and park, and be designed so that park access and active use areas are separated from school access and buildings by ballfields, free play areas, or other low intensity uses. Alternatively, school and park areas shall be designed with a visible demarcation between uses. Such demarcation shall consist of landscaping, such as a row of trees, or low fencing, and shall incorporate openings allowing convenient pedestrian access.



- e) ~~Neighborhood parks shall be situated between the K-8 school site and neighborhood commercial uses in order to provide a buffer between the two uses. Access to commercial and school uses shall be from different streets.~~
- f) ~~High school primary building complexes and lighted sports fields shall be separated from surrounding residential areas by unlighted fields and open space.~~
- f) The architectural character of the high schools may be the same as one of the neighborhoods, or may vary. The intent is to create a major institutional complex, serving as a focus for community activity and identity.
- g) All school sites shall have frontage on a minimum of two intersecting streets so that there is adequate street frontage to separate bus and parent/student drop off.
- h) The complex should reflect the architectural heritage of the San Joaquin Valley. Special consideration should be given to the climatic conditions, and protection of students from prevailing heat and winds.

Implementation:

- a) ~~School Facilities Plan. Prior to submittal of the first Development Permit, the School Districts shall prepare a School Facilities Plan that addresses student needs over a five-year planning horizon. The School Facilities Plan shall specify the schedule for the phased funding, planning, design, approvals, construction and opening of school facilities and provision of other required mitigations. It shall also address interim facilities needs prior to construction of permanent facilities.~~
- b) ~~K-8 School Plans. A plan for each K-8 school shall be a component of the Special Purpose Plans prepared for Neighborhood Centers (see Chapter Seventeen: Implementation for an explanation of Special Purpose Plans).~~
- a) K-8 School Plans. An "Educational Specification Process" for the first K-8 school shall be completed by Lammersville Elementary School District (LESD) and the results incorporated into the first Neighborhood Center Special Plan. Furthermore, prior to preparation of a School Facilities Master Plan the LESD and Tracy Joint Union High School District (TJUHSD) shall complete an Educational Specification Process as established by the California Department of Education, to determine the design and ultimate floor plan of the K-8 and 9-12 school facilities in Mountain House.
- b) School Facilities Master Plan. After completion of the Education Specification Plan for the first neighborhood, but prior to submittal of the first Development Permit, the Tracy Joint Union High and Lammersville Elementary School Districts shall prepare and the County shall approve a School Facilities Master Plan for each district that addresses student needs over a ten year planning horizon. The School Facilities Master Plan shall incorporate findings from the Education Specification Process and shall develop detailed cost estimates and shall specify the schedule for the phased funding, planning, design, approvals, construction and opening of school facilities and provision of other required mitigations. It shall also address interim facilities needs prior to construction of permanent facilities.
- c) Adequate interim facilities, including relocatable classrooms and support facilities will be provided at existing schools before the first on-site schools are completed.

- d) School Sites. The exact size (acreage) of K-8 and 9-12 schools sites shall be determined at the point of school design. Approximate acreages and configurations are as follows:
- Each new K-8 site shall contain up to 16 ~~net usable~~ acres in a generally rectangular shape. Each site shall be master planned to Elementary School District standards to accommodate the eventual buildout and student generation of its neighborhood (targeted to an optimum of approximately 750 K-8 students, with a maximum of 870 K-8 students per neighborhood).
 - Each 9-12 site shall contain up to 46.5 ~~net usable~~ acres in a generally rectangular shape. Each site shall be master planned according to High School District standards to accommodate the eventual buildout and student generation of the six closest residential neighborhoods (up to approximately 2,300 to 2,400 students).
- e) Adjacent Parkland. Each new K-8 school shall have shared use of an adjacent 2.4 acres of neighborhood parkland for athletic fields. ~~if such uses would allow for a reduction in the size of the school site. This parkland has the potential of increasing the total usable area of the school to 18.4 acres.~~
- f) Land. Land for schools shall be provided as described by the Public Financing Plan.
- g) Funding. Funding sources for school facilities including interim facilities and buses at existing off-site schools shall be identified in the Public Financing Plan.
- h) Student Generation Rates. The second and each subsequent Specific Plan shall contain an evaluation of current student generation rates against those assumed in earlier Specific Plans. If rates are higher, more schools and facilities may be required. If they are lower, fewer students may attend each school. This data may require a revision of the School Facilities Master Plan. The land use plan containing 12 K-8 schools and 2 high schools shall not be modified to change the number of schools without a Master Plan revision.
- i) State Funding. The Districts shall pursue State funding to the maximum extent possible after consideration of the facility phasing plan proposed in the School Facilities Master Plan and to the extent that the eligibility of existing District facilities is not negatively impacted.
- j) Local Funding. Developers in Mountain House shall provide full school mitigation after revenues from the state and other sources have been utilized to the fullest extent possible. "Full school mitigation" shall be determined through the Education Specification Process and, except for construction cost inflators agreed upon during that Process, these costs shall not increase in future years without agreement from the developers. Mitigation may be provided through impact fees, Mello-Roos financing, and/or any other sources that may be available in future years. The Districts and developers shall enter into Mitigation Agreements that set forth the required mitigation amount, future cost inflator, and anticipated funding sources for school facilities.

5.1.4 School Siting Criteria

The following school site location standards are compiled from the provisions of this Master Plan and from Title 5 California Code of Regulations, Chapter 1 of Division 13 Section 14001 et seq., Education Code 39001 et seq., Public Resource Code 21151.8, San Joaquin County General Plan 2010, and local School District criteria.

Chapter Three: Land Use, provides additional provisions for neighborhood structure and land use relationships.

Objective: To ensure that schools are located to efficiently serve the student population of each residential neighborhood.

Objective: To locate school sites to avoid health and safety problems while reinforcing the neighborhood concept and the joint use of parks and other community amenities.

Policies:

- a) K-8 school sites shall be located centrally within neighborhoods to facilitate pedestrian circulation and reinforce the neighborhood structure of Mountain House (see Chapter Three: Land Use).
- b) 9-12 school sites shall be located to efficiently serve the community and maximize joint use of parklands.
- c) All school sites shall be located to avoid public health and safety hazards and land use conflicts.
- d) The following site location standards shall be met in locating school sites. These criteria are subject to change as State regulations change, and are subject to concurrence and approval by the appropriate School District and the County.
 - **Neighborhood Schools:** One K-8 site shall be centrally located within each of the community's 12 residential neighborhoods to minimize walking distances. All K-8 site locations shall require the substantial majority of the serving residential neighborhood to be within 3/4 miles walking distance of the site. Sites for 9-12 schools shall be located so as to require all residential portions of the Master Plan area to be within two miles walking distance of a 9-12 site, and each shall be located central to the northern and southern groups of six residential neighborhoods.
 - **Adjacent Land Uses:** Surrounding land uses shall be compatible with schools and shall not pose a potential health or safety risk. Adjacency to intensive commercial, industrial, and agricultural uses shall be ~~minimized~~ avoided and the design of nearby commercial uses shall be coordinated with the School District. School sites shall not be immediately adjacent to each other.

School sites shall be located to ~~promote~~ enable joint use of parks, libraries, museums, and other public services whenever possible. Schools and parks shall be adjacent whenever possible. ~~Public parking and restrooms should be away from classrooms.~~
 - **Access and Driveway Visibility:** Sites shall provide minimum peripheral (typically 200 feet) visibility from planned site driveways. Sites shall be easily

accessible from Arterial roads (in accordance with Highway Design Manual Table 201.1). Sites shall comply with School Bus requirements for driveways. The preferred configuration is to have streets and sidewalks adjacent to on only two sides of the school site. To insure response by the California Highway Patrol in the event of bus accidents, schools should be located on publicly maintained roads.

K-8 sites shall be located with direct access to at least one Collector street, as well as have direct or indirect access to a second Collector or secondary road. 9-12 sites shall be located directly on a minor Arterial or larger street with direct or indirect access to a secondary road.

- Powerlines: All portions of school sites shall maintain the following distances from the edge of an existing or proposed power easement:

100 feet for 50-133 kV line
150 feet for 220-230 kV line
350 feet for 500-550 kV line

- Railroad Tracks: Distance to any portion of school site from a railroad track easement shall normally be at least 1,000 feet. Less distance may be allowed as determined by local risk analysis study to insure that cargo, speed, grade, curves, type of track pose no injury or damage risk on the school site.
- Sound Level: Adjacency to freeways, roads, airports, and other noise generators shall be considered to determine that sound will not affect the educational program on the school site. A maximum of 60 db Ldn or CNEL is recommended for any exterior portion of the school site. Where necessary, noise levels shall be mitigated with noise barriers.
- Flooding: All school sites shall be ~~in areas removed from flooding as defined by FEMA FIRM~~ outside the 100-year floodplain. ~~or County designation.~~
- Geologic Conditions: School sites shall not contain an active earthquake fault or fault trace. School sites shall not be located in an area subject to moderate or high liquefaction or landslide.
- Public Services and Utilities: School sites shall have timely access to all services sized to the needs of the School District including water, fire flow, sewer, drainage, phone, electric, and cable connections. Solid waste disposal and fire and police protection shall also be determined to be adequate.
- School sites shall be located using the State Department of Education process and in accordance with the provisions of this Master Plan.

Implementation:

- a) School Locations. The approximate locations of the two 9-12 schools and the 12 K-8 schools shall be as designated on the land use map in this Master Plan (see Figure 3.5: Land Use & Circulation Plan ~~and Section 5.1.6: School Siting Criteria~~).
- b) ~~Precise Locations. Specific Plans shall locate school sites relative to the secondary roadway system. The precise location of each K-8 school site shall be determined in coordination with the School District as part of the preparation of Special Purpose~~

~~Plans for Neighborhood Centers (see Chapter Seventeen: Implementation). The precise location of each high school shall be determined in coordination with the School District prior to submittal of any Development Permit for the subject area.~~

- b) Commercial and Traffic Locations. Location of commercial designations and traffic signalization near school sites shall be in compliance with State standards and incorporate School District design input.

5.1.5 School Support Facilities and Services

The school system is expected to require additional facilities and services such as busing, administrative office space, and certain interim facilities, such as relocatable classrooms at existing schools. In some cases these facilities may be on an interim basis at one location until more permanent facilities are needed and funded at another location. In other cases the need for services such as busing will eventually be minimized as students reside within safe walking distance of schools.

Objective: To provide for adequate school facility support needs to serve the school system.

Policies:

- a) Adequate interim and permanent school facility support needs, and certain identified operation and transportation impacts shall be provided. ~~on an as-needed basis.~~

Implementation:

- a) Interim Facilities. Interim relocatable classrooms and support facility ~~needs~~ ies for use at the existing off-site schools shall be provided to house students on a justified need basis based on student generation rates as contained either in the Master Plan of in the School Facilities Master Plan until adequate school capacity is open.
- b) Interim Vehicles. Interim use of buses and other special vehicles shall be provided for student transportation service ~~on a justified need basis until~~ based on student generation rates as contained either in the Master Plan of in the School Facilities Master Plan. Once schools within safe walking distance are open buses and other support vehicle needs shall be supplied as required. Shared use with any public transit shall be maximized.
- c) Service Support Center. Approximately five acres (phased), including construction of a service support center (e.g. transportation, warehouse, maintenance yard, etc.) shall be provided at the Old River Industrial Park Public Facilities area or at a location(s) acceptable to the School Districts.
- d) Administrative Offices. Acreage and facilities for interim and permanent School District Administrative Offices shall be provided ~~at locations acceptable to the Schools Districts on a justified need basis.~~ as specified in the School Facilities Master Plan
- e) ~~Food Facilities.~~ Food service support facilities shall be provided on a justified need basis at a location(s) to be coordinated by the School Districts.

5.1.6 Integration of School and Community Facilities

Designing for integration of school and other community facilities for compatible joint operation allows for efficiency in use and shared maintenance costs. In addition, joint or coordinated adjacent facilities and services allows for convenient one-stop use and access. The community provides opportunities for linkage of School Districts with other public services as provided by the CSD which can be explored to the benefit of the entire community.

Objective: To promote efficient use of community facilities.

Policies:

- a) The integration of educational facilities with parks and other community uses and services shall be encouraged wherever feasible and acceptable to the School Districts and the County Parks and Recreation Department.

Implementation:

- a) Links with Other Users. Links between school facilities and other services/users shall be promoted for such activities as adult education, child care, senior citizens, civic groups, parks and recreation, community sports complexes and community-wide communication systems.
- b) Participations with Districts. Participation with the School Districts shall be promoted in areas of facility lease/ownership, facility and landscape maintenance, vehicle storage and maintenance, and other areas.

5.2 CHILD CARE FACILITIES

Objective: To encourage the development of day and extended child care facilities within Mountain House.

Policies:

- a) Day and after school child care facilities shall be encouraged to locate within the community at sites which are easily accessible to residents and workers, and which are appropriate for child care uses.

Implementation:

- a) Child Care Centers. A minimum of three one-acre Child Care sites shall be provided. Each of the three sites shall be located adjacent to the K-8 schools in Neighborhood Centers. ~~The three sites shall be located in the following portions of the community: one child care site south of Grant Line Road, one between Grant Line and Byron Roads, and one north of Byron Road.~~ The sites will be equitably placed throughout the community. These sites will utilize acreage set aside for the 16-acre school site if the K-8 school can be adequately designed on 15 acres, within the Neighborhood Center or alternatively, provided within the Village Center commercial areas with the exception of the first Neighborhood Center which will include a child care site. Sites located within Neighborhood Centers shall be specifically located at the time the School Plan Special Purpose Plan for the Neighborhood Center is prepared. Sites provided as part of Village Centers shall be specifically delineated in the Special Purpose Plan for the Village Center.

- b) Dedication of Land. Land Set Aside. If the operator of the child care facility is a non-profit organization, the land shall be dedicated at no cost to the organization as described in the public lands equity transfer program in the Public Financing Plan. If a private or non-profit organization is selected as the child care operator, the lands will be sold or leased by the private land owner at a discounted value, with the conditional agreement that the operator will provide a minimum number of spaces for low income families.

The first child care site shall be made available to a qualified provider no later than upon completion of the first phase of the first K-8 school.

- b) Coordination with School District. Child care centers within Neighborhood Centers shall be coordinated with the Lammersville School District.
- c) Other Child Care Facilities. Other child care facilities shall be allowed to locate at each of the schools, neighborhood centers, in business parks, and adjacent to churches and commercial uses.
- d) Clearinghouse. A clearinghouse for day care information shall be provided by maintaining current files on day care providers for use by community residents.
- e) Costs. As child care centers are intended to be self-sustaining, it is assumed that all costs associated with development, operations and maintenance will be paid by private operators.

5.3 LIBRARY SERVICES

Library services are currently provided by the Stockton-San Joaquin County Library System. Branch libraries are located in Thornton, Linden, Tracy, Manteca, Ripon, Escalon and throughout the City of Stockton. The City of Lodi has its own public library.

Mountain House is intended to provide branch libraries to meet the requirements of the Stockton-San Joaquin County Public Library System.

Assumptions:

- a) The San Joaquin County General Plan requires new communities exceeding a population of 10,000 to have a branch library. The facility must be approved by the Stockton-San Joaquin County Public Library staff as part of the planning process. It is assumed that at least one library facility shall be available to the Mountain House community.

Objective: To provide library services to all residents of Mountain House.

Policies:

- a) Mountain House shall encourage cultural and educational opportunities through a public library suitable for the community.

Implementation:

- a) Library Facilities. The first phase of an on-site library with a minimum of 5,000 square feet shall be provided when the population reaches approximately 10,000 residents. By full buildout, a complete library totaling 21,000 square feet and with a seating capacity of 220 shall be constructed in Mountain House. The library shall meet the specifications of the "Standards for Branch Library Buildings" Study and will contain a minimum of 118,000

volumes including 176 periodicals and 2,000 audio and visual recordings. Books shall be provided at a ratio of two per capita and other facilities on a prorated basis.

- b) Interim Facilities. Initially, Mountain House shall be served by a bookmobile and interim leased facilities until the population necessitates the construction of a full-service branch library.
- c) Library Location. The Mountain House Library shall be located in or adjacent to the Town Center or in a Community Commercial area where convenient access is available.
- d) Library Staffing. Staffing services which are provided on a County-wide basis shall be supplemented by volunteers. ~~as well as a contract with the CSD.~~ The library shall be developed and operated in coordination with school needs.

5.4 PHASING AND COSTS

5.4.1 School Phasing

The order and timing of school facilities is dependent upon where, when and how fast development occurs. School facility construction plans are phased and will be triggered by development milestones according to the school plans. Phased permanent core facilities and classrooms may also be supplemented by relocatable classrooms according to State and School District standards and needs.

Until school facilities within the community are constructed, interim facilities will be provided at existing off-site schools. Busing and other required support services will also be required and provided on an as-needed basis.

Objective: To ensure the adequate and timely funding and provision of interim and permanent school facilities, operation and transportation services and necessary infrastructure.

Policies

- a) Funding and provision of school sites, facilities and services shall maintain pace with development and enrollment on a neighborhood basis.
- b) Timing requirements for phased provision of new school facilities shall be tied to residential development, enrollment experienced, and projected enrollment equaling a percentage of the ultimate school design capacity as approved by the School District.

Implementation:

- a) School Facilities Master Plan. As described in the County General Plan, the school district's School Facilities Master Plan shall accurately document its existing facilities, provide future school facilities projections (both short and long term), demonstrate the use of the current and projected revenues which are anticipated to meet those needs, document the district's reasonable good faith efforts to seek all available funding, and provide a current representation regarding the prospects for seeking and/or obtaining funds in the reasonably foreseeable future.
- b) Phasing of Schools and Infrastructure. School sites and public infrastructure and services shall be provided to allow opening of schools as scheduled in the school

plan. This will include requiring installation of sidewalks along all streets at the time of construction to ensure that there will always be safe routes to an existing school as the neighborhood builds out.

- c) K-8 School Openings. The following shall be targets for phased openings of each new K-8 school:
- Opening Phase 1 of the first K-8 (core facilities and approximately 600-700 capacity) when there are approximately 225 students or 375 occupied dwelling units.
 - Opening Phase 2 of the first K-8 (up to an optimum of 750, with a maximum of 870 capacity) when there are approximately 600-700 students or 1,050 occupied dwelling units.
 - Opening Phase 1 of each additional new K-8 when the most recently opened K-8 is near capacity.
 - Opening of Phase 2 of each additional new K-8 when it nears capacity or when there are approximately 600-700 students on each new Phase 1 site.
- d) High School Openings. The following shall be targets for phased opening of each new 9-12 schools:
- Opening Phase I of the first 9-12 (core facilities and about 1,200 capacity) when there are approximately 650 students.
 - Opening Phase II (an additional 600 capacity) when there are approximately 1,200 students.
 - Opening Phase III (an additional 600 capacity) when there are about 1,800 students.
 - Opening Phase I (core facilities and about 1,200 capacity) of the second high school when there are about 2,400 students.
 - Opening Phase II (additional 600 capacity) of the second high school when there are about 3,600 students.
 - Opening Phase III (additional 600 capacity) of the second high school when there are about 4,200 students.

5.4.2 Library Phasing

The bookmobile will be funded along with leased facilities for library operations to serve the initial residents in the community. The first phase of the central library facility will be built when approximately 3,500 residential units have been constructed, the second phase when 7,500 units are completed, the third phase when 11,000 units are completed, and the fourth and final phase when 14,500 units are completed.

5.4.3 Capital Facility Costs

Schools

The total cost of K-12 school facilities required to maintain the standards set forth in this chapter is approximately \$131.8 million. Of this total, \$72.7 million will be needed for K-8 core facilities, vehicles and equipment; \$54.9 million relates to high school facilities, vehicles and equipment; and \$4.2 million will be used to pay for temporary and permanent administrative space, food service facilities, and corporation yards. These cost estimates assume dedication of improved school sites.

Section 5.4.1: School Phasing ~~Phasing and Planning of School Facilities~~, sets forth the school facility phasing program for Mountain House. Generally, school facilities will be phased based on student generation with the objective of minimal temporary facilities usage for K-8 students. Because there is a minimum number of high school students that must be generated prior to opening a new school, there is more dependence on temporary housing at existing 9-12 facilities prior to opening the first phase of a new high school in Mountain House.

There is a conservative cost allowance for school buses and other vehicles considering that the neighborhoods have been designed so that most students are within walking distance of their school. The proposed community transit system will also provide service between schools for magnet and special education programs.

A detailed breakdown of school facility costs and phasing assumptions is provided in the Public Financing Plan (PFP).

Library

More than \$7 million have been included in the cost estimates for library facilities. The cost estimate assumes ~~dedication of a~~ that the library site will be dedicated. Funding for a central library includes a 21,000 square foot central facility, a minimum of 118,000 books and periodicals, and a bookmobile.

5.4.4 Operations and Maintenance

Schools

School operations in California are primarily funded by a State allocation to each school district that is determined based on average daily attendance (ADA) at district facilities. Because ADA, and therefore State funding, will increase as Mountain House develops, it is assumed that this revenue source will pay for operational costs associated with the new schools. However, in the first couple of years prior to student generation and a corresponding increase in State funding, detailed facility plans must be prepared for both K-8 and 9-12 facilities.

The cost of these plans will exceed the proportional ADA funding that will be available from the initial enrolled student population. In addition, Lammersville Elementary School District will need to hire a facility planner to assist in the planning process that will be required to provide K-8 facilities in Mountain House. In order to provide funding for this planning process, \$100,000 is included as a lump sum in the facility cost estimates. Due to the lack of alternative funding sources in the early years mechanisms for school operations, the Master Developer will be required to front money to cover these planning costs.

Based on the anticipated absorption schedule and financing plan, after the first two years there will be developer fees generated and Mello-Roos Districts formed to fund K-8 school facilities. These mechanisms will generate revenue that LESD can use to continue to fund the facility planner position. If revenues from these sources are insufficient or absorption in the first two years occurs more slowly than expected, the Master Developer may be required to contribute additional funds to cover the interim shortfall. The Master Developer shall be reimbursed for such contributions from fee revenues, Mello-Roos proceeds and/or other sources of funding available in future years. The School Facilities Master Plan will provide an estimate of the total reimbursement to the Master Developer, and the first Mello-Roos bond issued to fund school facilities shall generate sufficient proceeds to provide the Master Developer reimbursement. After the first elementary school has reached one-half of its planned capacity, LESD must meet with the Master Developer and discuss alternatives if the facility planner position is not fully funded from fee revenues or Mello-Roos proceeds.

Library

~~Library facility and grounds maintenance will be the responsibility of the County or a special district formed to take over some or all of these services. Regardless of the ultimate service provider, costs have been included in the PFP to ensure that revenues are available to offset these costs.~~

~~Although a branch library will be located in Mountain House, Library services will continue to be provided by the Stockton-San Joaquin County Library System for the branch library in Mountain House. The Library System receives a share of property tax revenues collected within the County to fund these services which include, among other things, library and bookmobile staffing and operations.~~

5.5 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Student Generation Rates. The second and each subsequent Specific Plan shall contain an evaluation of current student generation rates against those assumed in earlier Specific Plans. If rates are higher, more schools and facilities may be required. If they are lower, fewer students may attend each school. This data may require a revision of the School Facilities Master Plan. The land use plan containing 12 K-8 schools and 2 high schools shall not be modified to change the number of schools without a Master Plan revision.
- a) ~~School Locations. Specific Plans shall locate school sites relative to the secondary roadway system.~~

CHAPTER SIX



PUBLIC HEALTH AND SAFETY

CHAPTER SIX: PUBLIC HEALTH AND SAFETY

6.1	INTRODUCTION	1
6.2	POLICE PROTECTION	1
6.3	FIRE PROTECTION AND EMERGENCY RESPONSE	2
6.4	MEDICAL SERVICES	5
6.5	EMERGENCY PREPAREDNESS	6
6.6	ANIMAL CONTROL	7
6.7	WASTE MANAGEMENT	7
6.8	POTENTIAL SITE HAZARDS	11
6.8.1	Fuel Lines and Pipelines	11
6.8.2	Historic Pesticide / Herbicide Residues	12
6.8.3	Livestock Waste Management	13
6.8.4	Soils, Geologic and Seismic Hazards	14
6.8.5	Other Potential Hazards	15
6.9	ELECTRIC AND MAGNETIC FIELDS	16
6.10	ASBESTOS	17
6.11	MOSQUITO ABATEMENT	18
6.12	PHASING AND COSTS	18
6.12.1	Capital Facility Cost and Phasing	18
6.12.2	Operations and Maintenance	19
6.14	SPECIFIC PLAN REQUIREMENTS	20

List of Figures

Figure 6.1: Fire Station Locations	4
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CHAPTER SIX: PUBLIC HEALTH AND SAFETY

6.1 INTRODUCTION

The purpose of this chapter is to lay out the structure for the provision of public health and safety services at project completion, regardless of the initial service provider. Chapter Sixteen: Public Service Provisions, provides additional provisions on public services.

6.2 POLICE PROTECTION

An urban level of police service will be provided in the community from the commencement of construction. Such services will be provided by contract with the San Joaquin County Sheriff's Department, with supplementary private contracts for certain duties. The current police protection is provided at a rural level of service by the San Joaquin County Sheriff's Department.

Assumptions:

- a) The policies and objectives contained in this chapter are based on the assumption that there will be 5,400 calls for service per year at buildout.

Objective: To provide for the safety and security of the community and the protection of property through aggressive law enforcement, community education, and the solicitation of community involvement.

Policies:

- a) The standard for police protection shall be provided at a level at a minimum of 1.5 sworn officers per 1,000 population consistent with the standards for urban communities within ~~policies and practices of~~ San Joaquin County, and any additional needs required by the urban nature of the community.
- b) Police dispatching shall be located to maximize the ability of police to adequately serve all portions of the community. Dispatching shall be sited where safe and efficient access is available and shall not be located within residential neighborhoods.

Implementation:

- a) Police Facility. A police facility of 4,800 square feet shall be provided to serve the community. The first phase of this facility shall be provided when the community's population reaches 7,500 people.
- b) Interim Staffing. Police protection shall at least initially be provided by contract with the San Joaquin County Sheriff's Department.
- c) Description of Police Services. A detailed description of police services shall be prepared as part of the contract between the CSD and the County Sheriff's Department. Such contract shall be prepared prior to submittal of the first Development Permit.
- d) Communications. Local police dispatching shall be included within the Mountain House community if found viable by the Sheriff's Department and the CSD.

- e) Timing of Arrangements. A proposal for institutional and funding arrangements for providing police services shall be submitted at the time of formation of the Community Services District, as well as phasing of on-site police services, if required.
- f) Assignment of Officers. Deputy officers shall be assigned to the Mountain House community when the first residences in the first Specific Plan area are constructed.
- g) Marina. When the marina is constructed, the Fire Protection Plan shall be amended to include provisions to patrol the Mountain House marina and the immediate vicinity of the marina. The Specific Plan which includes the marina shall include provisions for marine patrols.
- h) Special Security Issues. Each Specific Plan shall address any special security issues unique to its area, unless adequately addressed in the Park and Open Space Plan.

6.3 FIRE PROTECTION AND EMERGENCY RESPONSE

The cost of fire safety service depends upon desired response times, quality, and quantity of service, as well as environmental conditions.

Mountain House is within the Tracy Rural Fire Protection District (TRFPD) which does not currently service urban developments at the service levels planned for Mountain House. Expanded services providing urban levels of service as defined by this Master Plan will be needed to serve Mountain House.

Services will be provided through a combination of interim and permanent facilities, as determined by the Tracy Rural Fire Protection District, in terms of timing and facility needs. Interim services will be provided from existing fire stations (see Figure 6.1: Fire Station Locations) augmented by interim on-site facilities if required. Two permanent fire station sites are identified on Figure 6.1. Tracy Rural Fire Protection District indicates that a third station may be required north of Byron Road near the west boundary depending on response times and extent of sprinklering. The need for the second or third station may be modified based upon provision of fire sprinklers in homes or other technological advances.

Assumptions:

- a) At community buildout, it is estimated that approximately 2,200 responses may be experienced annually. Approximately 80% will be of a medical nature, 10% for hazardous materials, and 10% for fires and other events.

Objective: To provide adequate fire protection and emergency response for the entire community at reasonable cost through quick response times and the reduction of fire risks.

Policies:

- a) The community shall provide an adequate level of urban fire protection service and emergency response either as a direct provider or by contracting for services.
- b) Fire risks shall be reduced as a result of inspections, programs in fire prevention, pre-fire planning, training, and the adoption of objectives and standards for these programs.
- c) Fire fighting capabilities shall be developed suitable for the community's specific needs.

- d) Fire stations and interim facilities shall be located to achieve a maximum run time of three minutes or 1.5 miles.
- e) Location Standards. Fire stations shall be strategically located so as to offer adequate fire protection to all portions of the community (see Figure 6.1: Fire Station Locations). Such facilities shall be located adjacent to Arterial roadways to provide for efficient access and site distance. Specific siting of fire stations relative to Collector and Arterial streets shall be determined in the applicable Specific Plan.

Implementation:

- a) CSD Fire Service. ~~At the same time as the community~~ The County shall apply applies for formation of a its CSD through LAFCO with approval of fire service as one of the CSD's service obligations.. ~~it shall also file~~ At the same time, an application for detachment from the Tracy Rural Fire District shall be filed.
- b) New Fire Stations. Fire stations shall be provided to meet the service standards required by this Master Plan. The fire station shall be added when required to meet the maximum run time of three minutes.
- c) Location of Fire Stations. Fire stations shall be strategically located so as to offer adequate fire protection to all portions of the community. Precise siting shall be determined in the Fire Protection Plan and the applicable Specific Plan.
- d) Permanent Staffing. The Mountain House fire safety plan shall take advantage of a fully-integrated response system using a staff of professional fire fighters and paramedics augmented by cross-trained employees of the CSD.
- e) Emergency Response. In order to accommodate a less than three-minute response time, one or two fire houses shall be constructed with the timing and location to be determined by the fire service provider.
- f) Structure Types. The size and types of commercial buildings constructed within Mountain House shall dictate the fire equipment needs. Structures higher than two stories shall require additional specialized equipment, and, if proposed, shall require an evaluation of added needs.
- g) Fire Protection Standards. Standards for fire protection shall be developed between the CSD and the Tracy Rural Fire Protection District. These standards shall be prepared prior to submittal of first Development Permit.

Issues addressed in the standards shall include:

- Standards for the development and construction of facilities to reduce the cost of fire protection and increase safety throughout the community.
- Implementation of public education, public safety, and fire prevention through adoption of regulations and policies.
- Regulations for weed abatement and elimination of potential fire hazards in industrial waste materials.
- A hazardous material labeling program and classification system.



Fire Station Locations

- h) Communications. An integrated communications system for fire and police as well as utilities shall be established. Alternatively, communications shall be provided by participation in the County's existing dispatch systems.
- i) Fire Protection Plan. A Fire Protection Plan shall be accepted by the County before submittal of the first Development Permit.

6.4 MEDICAL SERVICES

Medical services are normally private operations which require a critical population base before private operators will locate within a community. In the early phases of Mountain House development, residents will likely utilize existing facilities and doctors in nearby cities. As the community grows, medical care will develop in response to market demand.

Emergency medical services within the County are currently provided through a combination of fire protection services and private vendors. As noted in the Fire Section, paramedic services shall be included as part of Mountain House's community service. Initially, a private ambulance service shall be used for transport. First response shall be done by the fire department, in cooperation with trained paramedics.

Assumptions:

- a) It is assumed that eighty percent (80%) of the calls, as noted in the Fire Section, will be of a medical nature.
- b) It is anticipated that a full service hospital will want to locate in the community sometime after 50% buildout.
- c) Private medical offices and emergency care centers will be naturally drawn to the community as demand increases.

Objective: To encourage the development of high quality medical services within Mountain House.

Objective: To provide emergency medical service and transport as needed to serve the community.

Policies:

- a) Medical facilities shall be permitted to locate within the community at sites which are easily accessible to residents and workers and which are appropriate for such uses.
- b) ~~Mountain House shall provide a maximum response time of five minutes to all emergency medical service requests.~~
- b) Medical offices shall be allowed to locate in business park, mixed use, and commercial land use areas, except for commercial freeway service areas. Such uses shall be designed and configured to appear as office type uses with adequate parking.
- c) Urgent care centers, hospitals, and other facilities providing emergency medical care shall be permitted in commercial and/or business park areas, except for commercial freeway service areas. Such uses shall be situated on Arterial roadways, preferably along the Patterson Pass Road corridor, and shall be located and configured to minimize the impact of ambulance and other traffic on nearby residential neighborhoods. A major roadway,

landscape easement, or other effective buffer shall separate such uses from residential and other sensitive land uses. Access to such facilities shall be provided from Arterial streets and shall be separate from neighborhood access points.

Implementation:

- a) Emergency Medical Preparedness Program. Mountain House shall incorporate into its emergency medical preparedness program the use of paramedics in each of the fire companies with supplemental transport service by a private contractor or as specified in the Fire Protection Plan.
- b) Additional Emergency Response. In addition to the normal fire equipment, specified utility vehicles will carry a minimum amount of medical emergency supplies and equipment in order to respond to emergencies and provide prompt response and backup to the fire department.

6.5 EMERGENCY PREPAREDNESS

Mountain House's long term concept is to have a comprehensive Public Safety Department with integrated use of personnel between fire, police, medical, and other cross-trained CSD personnel that would respond to all emergencies.

Hazardous materials are addressed in Section 6.8: Potential Site Hazards. ~~Hazardous Materials.~~

Assumptions:

- a) It is assumed that Mountain House will experience one natural disaster every 10 years.

Objective: To insure that the community is adequately prepared to respond to natural disasters.

Objective: To be prepared to respond to emergencies, including those involving releases of hazardous materials, associated with freight transport along railroads.

Policies:

- a) Safety and protection services shall be provided to the community in the event of fire and natural disasters and emergencies resulting from accidents, including emergencies involving releases of hazardous materials.
- b) Emergency responses shall be provided for the community for the protection of the public.

Implementation:

- a) Emergency Preparedness Plan. An Emergency Preparedness Plan (called Incident Action Plan by San Joaquin Office of Emergency Services) shall be prepared as required by the County Office of Emergency Services and approved prior to the first Development Permit. The plan shall provide for routine training programs and drills to be conducted on an annual basis, and shall be maintained by the CSD.
- b) Natural Disaster Response. Response shall be by Fire District staff with backup by OES staff. Earthquake preparedness and flood response training shall be an integral part of the emergency preparedness and response program.

- c) Buffer Zones along Railroads. Specific Plans shall establish buffer zones between structures proposed in areas adjacent to railroads and the track right-of-way to reduce potential public safety impacts from railway accidents. The Specific Plan for Neighborhood J shall include safety criteria for determining buffer zone widths north of Byron Road where residential uses are proposed.
- d) Requirements for Businesses along Railroads. Specific Plans shall contain requirements for businesses and public institutions located adjacent to the railway buffer zones to maintain emergency contingency and evacuation plans in the event of a railway accident.
- e) Railway Accident Component. The emergency preparedness and response plan required by OES shall include a component on emergency response to railway accidents, including those involving releases of hazardous materials. This component shall be consistent with provisions in implementation measures c) and d) above.

6.6 ANIMAL CONTROL

The Mountain House community will require animal control for domestic animals and for wild animal habitat.

Objective: To ensure that all animals are properly controlled and protected.

Policies:

- a) Animal control services shall be provided on-site when demand requires, either through the existing County program or through a CSD-operated program.

Implementation:

- a) Interim Staffing. Initial urban services will be provided by the County animal control facility on a contract basis.
- b) Animal Control Facility. An animal control facility or expansion of existing County facilities to accommodate normal domestic animals, as well as the occasional wild animal problem, shall be provided. ~~A wildlife management program shall be approved prior to submittal of the first Development Permit.~~
- c) Long Term Facilities. Long term animal control including on-site facilities may be provided directly by the CSD if determined feasible.

6.7 WASTE MANAGEMENT

Solid waste generated by the new community will be managed in accordance with the goals of the California Integrated Management Act of 1989, as amended from time to time. The Act calls for a 50% reduction in the solid waste stream going to landfills by the year 2000. This reduction goal can only be achieved through conservation, source reduction, recycling practices, and green waste recycling.

Conformance with the Act is the responsibility of the County Public Work's Solid Waste Division. Mountain House is within the Tracy waste area: within this area the County has contracted with Delta Disposal for residential waste collection.

To meet the requirements of the Act, the County has developed a rural plan for source reduction, recycling, and composting as a means of reducing the waste stream. All solid waste in Mountain

House will be taken to the Tracy Materials Recovery and Transfer Facility located south of the City of Tracy. All recyclables are recovered and green waste is composted, with remaining waste trucked approximately 45 miles to the Foothill Sanitary Landfill located at the eastern edge of the County, which is estimated to have capacity for the next 40 years.

Although the Transfer Facility has been planned to accommodate projected growth in the south County area (both incorporated and unincorporated areas), it is anticipated that this transfer facility will reach "full operating capacity" by approximately 2010. This will necessitate an expansion of the facility and/or construction of additional transfer facilities. It is proposed that a 10-acre site be reserved in the public land use area of the Old River Industrial Park if expansions to the Tracy facility do not occur. If the site is not required, the area can be designated for other purposes.

The Solid Waste Division has also implemented a program to comply with the law as it relates to the disposal of household hazardous wastes such as paint, oil, solvents and antifreeze. This program is regional in nature and includes the area of Mountain House. This Master Plan does not propose any program in addition to that already provided by the County.

The County Office of Emergency Services must be provided with information on any toxic spills in the community. The Fire Department shall maintain records and locations of toxic materials and maintain close coordination with the County Office of Emergency Services.

Hazardous wastes that may be generated by the water and wastewater treatment plants have not been included in the County's regional program and require tailored provisions for their disposal. A "Hazardous Materials Management Plan" will be developed for Mountain House to address the unique waste requirements generated from these facilities.

Assumptions:

- a) The amount of waste generated by this project, at build-out, will be reduced by 50% over what would currently be generated, per the requirements of the State's Integrated Waste Management Act of 1989.
- b) All development within Mountain House shall be consistent with the regional hazardous waste management program as adopted by the County.
- c) A "Hazardous Materials Management Plan" will be adopted prior to approval of a Development Permit for either the water or the wastewater treatment plants.

Objectives:

- a) To provide for adequate waste management, reduce waste volumes to County landfills, and encourage a comprehensive recycling program within Mountain House.
- b) To provide for an on-site materials recovery facility, ~~transfer station~~ if required, when the current Tracy Materials and Recovery Transfer Station reaches "full operating capacity".
- c) To make the site reserved for the materials recovery facility ~~transfer station~~ available in the interim for on-site composting of green waste and re-use within the community.
- d) To provide for proper handling and disposal of hazardous materials.
- e) To insure the safe handling of chemicals and other hazardous materials used at the water and wastewater treatment plants.

Policies:

Residential and Green Waste

- a) Recycling shall be mandated in order to reduce waste volumes.
- b) Waste collection shall be performed in a manner consistent with the County's plan and that reflects the State-mandated, integrated waste management program, and with any revisions implemented in the future.

Hazardous Waste

- c) Handling, use and storage of hazardous chemicals shall be carried out in compliance with all applicable safety standards and coordinated with County programs.

Implementation:

- a) Transfer Station Materials Recovery Facility Site. A 10-acre site shall be reserved within the 50-acre site designated for Public uses in the Old River Industrial Park for a materials recovery facility. ~~waste transfer station.~~ Once the Tracy Materials Recovery and Transfer Facility has reached full operating capacity, this site shall be developed. If the current transfer facility site is expanded so that the Mountain House site is not needed to accommodate the present or future waste transfer demands of the town, this property shall be made available for other public uses.
- b) Land Area. The size of land(s) to be allocated for the on-site transfer station, recycling, and composting center(s) shall be determined on the basis of the actual waste generation rates and projected recycling rates to meet State-mandated reductions in solid waste disposal.
- c) Provisions for Recycling. Areas for recycling containers or adequate provisions for ensure on-site recycling opportunities at proposed commercial facilities and large apartment complexes shall be incorporated into Tentative Map.
- d) Recyclable construction waste, such as wood and metal, shall be separated and arrangement shall be made with the County, or on-site recycling services, for collection. Recycling of construction wastes shall be made part of the construction specifications for contractors.

Residential and Green Waste

- e) Curbside Recycling. Mountain House will participate in the curbside recycling program set up by the County. This program will include, but not be limited to curbside collection of:
 - Aluminum
 - Plastic
 - Glass
 - Paper, and
 - Green waste.
- f) Community Composting. An area within the materials recovery facility ~~transfer station~~ site (one-acre minimum area) shall be set aside and made available for community

recycling of green waste. An on-site chipper and front end loader will process green waste for re-use within the project site.

- g) Garbage and Recycling Contract. Initially the community will participate in the garbage and recycling contract set up by the County for other unincorporated properties in the Tracy area.
- e) ~~Future Operator. Future waste collection operators shall be evaluated on a regular basis and changed as appropriate to meet the needs of the community.~~

Household Hazardous Waste

- h) Household Hazardous Waste Management. The Mountain House community shall develop an overall recycling program which shall include a household hazardous waste drop-off program. The program shall include the following elements:
- The option of using the Tracy Materials Recovery and Transfer station as a drop-off for all recyclable household hazardous waste such as used oil, oil filters, automotive batteries and used antifreeze.
 - Compliance with the regional hazardous waste material program. There shall be coordination through a public information program to implement the work performed by the County. Information describing types of hazardous materials and methods of properly disposing of these materials shall be distributed to the public.

Hazardous Materials from Treatment Plants

- i) Hazardous Materials from Treatment Plants. A Hazardous Materials Management Plan shall be developed for submittal with State permits prior to approval of the first Development Permit for either the water treatment facility and for the or wastewater facility. This plan will address the disposal of potentially hazardous chemicals used in the water and the wastewater treatment and reclamation facilities. The management plan shall be based on the State Health and Safety Code Chapter 6.95, Division 20, Section 25500. Included will be chemical inventory sheets of all the chemicals used and/or stored on-site. The information will be provided on forms provided by the County with the intent to identify every potentially hazardous material used at the plants. The Plan shall also comply with the requirements of the County Office of Emergency Services.
- j) Contents of the Hazardous Materials Management Plan. The Plan shall include the following requirements:
- Storage of hazardous chemicals shall be carried out in compliance with all applicable safety regulations and designed in accordance with the Uniform Fire Code.
 - A locked storage area shall be designated for each chemical with protection from fire. Incompatible chemicals shall not be stored in the same area.
 - The handling of hazardous materials shall only be done by qualified personnel. Authorized personnel shall be required to wear proper safety attire for the type of chemical being handled.
 - The appropriate ventilation and respiratory protection shall be provided for the type of chemicals that will be utilized.

6.8 POTENTIAL SITE HAZARDS

6.8.1 Fuel Lines and Pipelines

The natural gas transmission lines which traverse the site transport flammable and explosive material under pressure. To protect the public's health and adjacent properties, the operation and safety of high pressure gas pipelines is regulated by the California Public Utilities Commission (PUC).

Leaks or spills associated with existing and abandoned hazardous liquid pipelines could affect the subsurface soil and groundwater quality at the site and subsequent excavation in the vicinity of the pipelines might uncover unknown releases. To protect the public's health and adjacent properties, the operation and safety of hazardous liquid pipelines is regulated by the State Fire Marshal.

Within the project area, there are several underground fuel pipelines (see Figure 1.8: Pre-Development (1993) Site Constraints), including:

- a) A PG&E owned 6/8-inch diameter natural gas pipeline (Line #176), which runs northwest to southeast, crosses Byron Road and Patterson Pass Road, and is being proposed for relocation along Byron Road and Central Parkway,
- b) A PG&E owned 26-inch diameter natural gas pipeline, which runs northwest to southeast, and crosses Grant Line Road in the southern portion of the project,
- c) A PG&E owned, 36-inch diameter natural gas pipeline is located adjacent and parallel to the existing 26-inch diameter PG&E natural gas pipeline,
- d) A Chevron owned 6-inch diameter petroleum products pipeline located along the Byron Road right-of-way,
- e) A Chevron owned 18-inch diameter crude oil pipeline located adjacent and parallel to the existing 26-inch diameter PG&E natural gas pipeline,
- f) A Santa Fe Pacific owned 12-inch diameter crude oil pipeline located within the Southern Pacific Railroad right-of-way.

Objective: To protect against fuel releases which could negatively impact the quality of groundwater resources, soils, and public health and property.

Objective: To minimize the risk of human injury or property damage in the event of an explosion and/or fire at a natural gas pipeline.

Policies:

- a) Prior to any construction, appropriate plans, operating procedures and safeguards shall be undertaken to insure safety in the area of fuel lines and pipelines.
- b) A Pipeline Safety Plan shall be included in the emergency preparedness plan described in Section 6.5, to minimize risks associated with natural gas pipelines within the project site.

Implementation:

- a) Site Assessments. For areas located within 500 feet of any pipeline, a preliminary site assessment shall be prepared prior to submittal of each Specific Plan ~~the first Development Permit~~ by a qualified professional in compliance with the requirements of the County Environmental Health Department. If contamination is identified, an investigation and remediation shall be undertaken in accordance with the requirements of the County and the Regional Water Quality Control Board.
- b) Mapping of Pipelines. Figure 1.8: Pre-Development (1993) Site Constraints provides a map showing the general location of all existing and abandoned fuel lines. For areas located within 500 feet of any pipeline, more detailed and accurate mapping of pipelines shall be provided and the potential impact of the fuel lines on the area shall be assessed. For Specific Plan I, the map and assessment shall be prepared prior to submittal of the first Development Permit. Other Specific Plans shall include a map and assessment.
- c) Review by Owners. Prior to the approval of any Tentative Map located within 500 feet of any pipeline, development plans shall be submitted for the review and approval of owners of buried fuel pipelines that are located within 500 feet of the boundary of the map area. As part of the development plan review and approval:
 - Owners of high pressure gas pipelines shall be responsible for ensuring that the operation and condition of their pipelines are in compliance with PUC regulations for proposed land uses on and adjacent to their easement, and
 - Operators of hazardous liquids pipelines shall be responsible for ensuring that the operation and condition of their pipelines are in compliance with State Fire Marshal regulations for proposed land uses on and adjacent to their easement.
- d) Class Location Designation. The class location designation should be revised by the PUC for any high pressure gas pipelines that would be proximate to residential development. Alternative routes for future gas pipelines should be identified by the developer and approved by the PUC.

6.8.2 Historic Pesticide / Herbicide Residues

The agricultural lands within the boundary of the Mountain House community may have pesticide and/or herbicide residues present, although unofficial sample testings have not shown the existence of detectable levels of listed dangerous substances. It is possible that local concentrations of pesticide and/or herbicide chemicals may be present at sites where the materials have been stored or disposed. Additional pesticide or herbicide concentrations could build up prior to actual development.

To properly address this issue, specific site assessments are customarily performed immediately prior to construction to determine the presence of materials or chemicals that could be hazardous. If it is discovered that excessive residues do exist at a site, various methods have been developed that minimize the impact. Such methods include applying neutralizing chemicals, on site encapsulation, removal of the residue or allowing the residue to dissipate or decompose over time.

Objective: To protect the environment and the public health and safety of the community from the potential harmful effects of the residues of pesticides and herbicides that may be present as a result of past agricultural activities.

Policies:

- a) State listed bio-accumulative pesticides that exceed soil concentration thresholds shall be remediated through approved procedures.

Implementation:

- a) Site Assessments. ~~Prior to the~~ With submittal of any Tentative Map Development Permit within each Specific Plan area, a preliminary site assessment shall be included made to determine the existence of excessive pesticides and herbicide residue. If such residues are found to exist, a program shall be prepared that will detail the procedure to be used to remediate said residue. The program shall be submitted to the San Joaquin County Environmental Health Department, and the Regional Water Quality Control Board for review and approval. Construction will be allowed to proceed when an acceptable residue level is achieved, as determined by local and state agencies.
- b) Pesticide/Herbicide Application. In anticipation of the development of specific areas, pesticide and/or herbicide application shall be reduced or eliminated six months prior to Development Permit submittal.
- c) Water Wells. A component of the required site assessment for pesticides and herbicide residues shall include an investigation of the location and condition of currently used and abandoned water wells. Wells in use that do not have appropriate sanitary seals shall be retrofitted to protect groundwater quality. Wells that are no longer in use shall be properly abandoned prior to construction and approved by the Environmental Health Department.

6.8.3 Livestock Waste Management

Two dairy farms exist within the Master Plan area. Both are located along Patterson Pass Road near the intersection with Grant Line Road (see Figure 1.5: 1993 Cropping Patterns Map).

As urban development occurs within close proximity to existing dairies, the public health and safety may be affected by contamination from dairy waste to the surface and ground water.

Objective: To protect the environment and the public from exposure to water contamination by dairy waste, and to limit the exposure of the public to dairy waste.

Policies:

- a) Physical contact to dairy waste by the public shall not be allowed.

Implementation:

- a) Site Assessment. Specific Plans shall address existing dairy operations within 1000 feet of proposed residential development to determine if such a development would be impacted by the proximity of the dairy operations.

6.8.4 Soils, Geologic and Seismic Hazards

Potential geological and seismic hazards are earthquakes and soil erosion. Appendices 1-C and 1-D contain information on seismicity, soils classifications (including a soils map), and soils properties. Grading standards are addressed in Chapter Four: Development and Design.

Soils and erosion standards are addressed by existing regulations of various agencies. The Subdivision Map Act requires that a preliminary soils report, based upon adequate test borings, be prepared for every subdivision for which a Final Map is required. Section 9-900.3 of the San Joaquin County Development Title has adopted the provisions of the Subdivision Map Act for all divisions of land within San Joaquin County.

The State Water Resources Control Board (SWRCB) has published a handbook covering Best Management Practices (BMP) that include the reduction of storm water pollution as a result of construction activities, including excessive erosion and sedimentation. The SWRCB requires all parties engaged in construction activities to:

- a) File a Notice of Intent (NOI) to the SWRCB prior to the start of construction. The NOI certifies that the permittee will comply with conditions of the States' general construction permit.
- b) Prepare Storm Water Pollution Prevention Plan (SWPPP) that will describe the measures or practices that will control pollutants. The SWPPP must be prepared and implemented prior to start of construction.

Objective: To minimize the adverse economic, social and physical impacts from soils, geologic hazards and seismic occurrences.

Objective: To reduce soil erosion and sedimentation as a result of construction activities.

Policies:

- a) Project residents and workers shall be made aware of seismic hazards and informed of ways to reduce these hazards.
- b) Adequate efforts shall be made during design and construction of urban improvements, including buildings, to control or eliminate, if possible, soil erosion and sedimentation associated with construction activities.

Implementation:

- a) Earthquake Preparedness Plan. A community earthquake preparedness plan shall be accepted prior to submittal of the first Development Permit. At a minimum, this plan shall comply with the requirements of developed when required by the San Joaquin County Office of Emergency Services. ~~to assist in the goal of community education. This plan shall be reviewed and updated annually during the operational phase of the community.~~

6.8.5 Other Potential Hazards

Other potential hazards include abandoned gas exploration wells, and canals (see Figure 1.8: Pre-Development Site Constraints). Agricultural facilities are discussed in Chapter Sixteen: Public Service Provisions, as part of phasing interim agricultural activities.

Objective: To avoid public health and safety problems due to abandoned oil and gas wells, agricultural facilities and canals.

Policies:

- a) Potential hazards existing on the site shall be identified and avoided as part of the community development. Such hazards include abandoned gas exploration wells, agricultural facilities and canals, and the small household landfill.

Implementation:

- a) Mapping of Abandoned Gas Wells. Prior to the submittal of any Tentative Map, a map shall be prepared of the approximate location of abandoned gas exploration wells or other previously recorded sources of hazardous substances within ~~500~~ 300 feet of the map area, and a field and records inspection shall be made to determine if the County's procedures for well abandonment and remediation have been followed. Corrective actions, such as well abandonment and soil remediation, if required, must be completed prior to recordation of a Final Map or the issuance of a building permit for the affected area, whichever occurs first. (See Figure 1.8: Pre-Development Site Constraints).
- b) Site Searches. Prior to the submittal of any Tentative Map, the property owner shall submit a Site Assessment prepared in accordance with ASTM Standards to conduct a Phase I and Phase II site investigation for the presence of any fuel, pesticide or chemical residue on or under the soil that is listed on the State or Federal list of toxic materials. ~~A Phase II investigation shall be required if the Phase I investigation indicates the likely presence of listed toxic materials.~~ If any residues are found in excess of the allowable amounts, then a program of corrective action will be undertaken and implemented prior to recording of the Final Map. Corrective actions shall be conducted in accordance with the requirements of the County Environmental Health Department and the applicable State Agency (i.e., Regional Water Quality Control Board, California Dept. of Toxic Substances Control, etc.).
- c) Canals. Each Tentative Map application shall include an evaluation of the safety considerations of open canals within a half mile of the map area. Means shall be taken to reduce the attractive nuisance such canals may pose through fencing, signage, restriction of access from the tentative map area or other means.
- d) Pre-Development Household Landfill. The small household landfill in the center of the site shall be remediated. Either the material shall be removed in conjunction with soil and groundwater sampling prior to construction within 500 feet or a health risk assessment shall be performed to determine whether an engineered cap would effectively mitigate environmental and health impacts associated with the landfill.

6.9 ELECTRIC AND MAGNETIC FIELDS

Electric Magnetic Fields (EMF) are invisible fields of force created by electric voltage (electric fields) and by electric current (magnetic fields). EMF's exist in a wide variety of areas, including in appliances, homes, schools and offices, and near electric power transmission lines.

Currently there is no scientific consensus that exposure to EMF's is detrimental to health. The California Department of Education has taken a conservative approach in evaluating potential elementary and high school sites located near electric power transmission lines. Their May 1993 notice entitled "Policy Related to High Voltage Power Lines" recommends minimum school site setbacks. The minimum setbacks are specified in Chapter Four of this Master Plan.

Figure 1.8: Pre-Development (1993) Site Constraints illustrates the location of tower lines. Within the Master Plan area, possible sources of EMF's from existing and proposed electric power transmission facilities include:

- a) The Weber-Herdlyn 60 kV electric power transmission lines, within a 30-foot easement, which run northwest to southeast across the northern portion of the project, parallel to Old River. This facility is being proposed by the master developer for relocation along Byron Road.
- b) The Rio Oso-Tesla 230 kV electric power transmission lines, within a 75-foot easement, which run northeast to southwest across the eastern portion of the project.
- c) Proposed 500 kV electric power transmission lines, within a 192.5 foot easement, which is adjacent and parallel to the existing Rio Oso-Tesla electric power transmission lines. However, PG&E has halted the Rancho Seco-Tesla project. ~~has been abandoned and~~ No commitment on the future plans for relinquishing their 192.5-foot easement has been determined.

Objective: To protect the public health from the potential harmful effect of exposure to EMF's.

Objective: To provide EMF information to the residents and occupants of structures located adjacent to existing or proposed transmission line easements within the community.

Policies:

- a) New power system facilities shall be planned, designed and constructed to minimize the public's exposure to EMF's.
- b) The community shall be developed in compliance with EMF standards established by responsible state and federal regulatory agencies.
- c) Elementary and high school sites shall be located an adequate distance from transmission lines to meet setback criteria adopted by the California Department of Education (see siting criteria in Chapter Five: Education, Child Care and Library Services).
- d) Minimum setbacks shall be established from the edge of the Rio Oso-Tesla powerline easement for other uses as follows.
 - Residential dwelling units 25 feet
 - Non-residential structures 10 feet
 - Parking and storage areas no setback

Implementation:

- a) Implementation of EMF Standards. The California Department of Education is currently the only responsible state regulatory agency which has adopted EMF standards. No EMF regulations or standards will be applied to any land use other than schools until such time as official regulations or standards have been established. In the future, if the California Department of Health Services or other responsible state or federal regulatory agencies should adopt EMF standards, such standards shall be incorporated into development plans for the community. Such standards may include required residential building setbacks for living quarters (excluding storage buildings and garages) and may or may not result in fewer units in affected neighborhoods.
- b) Public Information. On an annual basis, public information material shall be compiled on the potential health problems caused by exposure to EMF's from all sources, including overhead transmission lines. The public information packet shall be provided to residents or occupants of structures located adjacent to existing or proposed transmission line easements located within the Mountain House community.
- c) Relocation of Weber-Herdlyn Line. The 60-kV Weber-Herdlyn line shall be relocated to an alignment that parallels the Mococo Railroad line. The proposed realignment shall be shown in the first residential Specific Plan north of Byron Road. The alignment will be located as far as possible from any residential land uses and will be relocated prior to the issuance of any residential building permits north of Byron Road.
- d) Additional Residential Setbacks. Additional setbacks for residential uses shall be established if future research indicates that such setbacks are necessary to ensure the public health and safety. Each Specific Plan adjacent to the Rio Oso-Tesla easement that contains residential development (i.e., Neighborhoods A, B and D) shall include an analysis of potential EMF hazards for residential uses using the best available information. If indicated, appropriate setbacks from the powerline easement shall be established for these neighborhoods at the Specific Plan stage.

6.10 ASBESTOS

Objective: To protect the public from exposure to asbestos-containing materials.

Policy:

- a) Demolition or renovation of structures that were built prior to the 1970's or are suspected to incorporate asbestos-containing materials shall be surveyed and abated as required by State and County guidelines and regulations.

Implementation:

- a) Asbestos Screening. Structures that would be removed or renovated as part of the project shall be screened or surveyed for the presence of asbestos-containing materials. Removal of structures shall only occur after obtaining a demolition release form from SIVUAPCD and a demolition permit approved by the Planning Division of the Community Development Department and Environmental; Health Department. If asbestos were present, renovation and/or demolition shall be undertaken only by licensed asbestos abatement contractors trained in proper asbestos removal and disposal procedures.

- b) Demolition Permit. A demolition permit, to be approved by the County Community Development Department and Environmental Health Department shall be required prior to all proposed building demolition.

6.11 MOSQUITO ABATEMENT

Urbanized areas experience mosquito infestations from off-site sources or from on-site sources which have not been drained, especially wetland restoration or other wildlife habitat creation projects. As mosquitoes can take as little as three weeks to hatch under favorable conditions, the creation of wildlife habitat, such as Mountain House Creek corridor, could produce large numbers of mosquitoes unless properly designed. Restored or created wetlands, therefore, provide the most significant potential for mosquito production on-site after development.

Appendix 6-A: Mosquito Abatement provides additional provisions on this topic.

Objective: To provide mosquito abatement measures for all potential breeding areas within the Mountain House Creek corridor.

Policies:

- a) The Mountain House Creek corridor and other potential standing water areas shall be designed using sound ecological methods employed to reduce and, to the extent possible, eliminate mosquito production consistent with Appendix 6-A.

6.12 PHASING AND COSTS

6.12.1 Capital Facility Cost and Phasing

Police and Fire

Over \$4.7 million will be expended to provide police and fire facilities, vehicles, and equipment in Mountain House. It is anticipated that one police substation and two fire stations will be built in the community for a total cost of approximately \$4.0 million. The police substation will include holding and dispatch facilities. Fire administration and communication facilities of approximately 800 square feet will be constructed together with the police substation. One temporary fire facility is included in the capital costs. More than \$700,000 will be used to purchase fire trucks, ambulance and rescue vehicles, patrol cars, and staff cars.

Initial fire protection will be provided either from existing Tracy Rural Fire District facilities or from interim facilities located near the community. ~~On-site locations will most likely be required by the end of the completion of the first three neighborhoods. A more precise facilities timing schedule will be included in a Fire and Emergency protection plan to be completed prior to the submittal of the first Development Permit.~~ Criteria to be used in determining the facilities timing shall include the County's General plan requirements, the Fire Protection Providers guidelines, existing facilities and their anticipated use rates, anticipated impacts of growing traffic on response times, actual and anticipated development and the finalized locating of the various stations.

A temporary fire facility will be provided prior to the construction of permanent facilities. It is anticipated that the first fire station will be built when there are approximately 1,800 homes in the community and will be expanded when there are 4,200 homes and three neighborhoods developed. The first phase of the second station

will be needed when there are approximately 9,400 homes in Mountain House; the facility will be expanded when 12,000 units have been built.

~~Police provisions, both phasing and levels of service, under the control of the San Joaquin County Sheriff's office until such time as a definitive service contract is placed in effect~~ A contract for police station will be executed between the County and the CSD. This contract will specify service levels and facilities needs for various levels of development. It is anticipated that the first phase of an on-site police substation will be provided when the community's population reaches approximately 7,500. The final decision will rest with the Sheriff's department based on the department's success in meeting urban levels of service without an on-site station.

Fire protection and police vehicles will be purchased on an as-needed basis throughout development of the community, starting in the first few years. Cost estimates assume that sites for fire stations and the police substation will be dedicated. A detailed facility cost and phasing plan is provided in the PFP.

Medical Facilities

It is assumed that private medical offices, emergency care centers, and hospitals will want to locate in Mountain House; as these facilities are assumed to be managed by private operators, no public facility costs are anticipated. However, paramedic services are intended to be provided by the fire department serving Mountain House. Therefore the cost of emergency vehicles will be included in the PFP. Specifically, the purchase of one rescue vehicle is anticipated for a total cost of almost \$100,000. As currently planned, the rescue vehicle will be purchased during the first year residential units are developed.

Animal Control

Initially, animal control will be provided by the County on a contract basis, and current County facilities will be used. However, as the community grows, an on-site animal control facility may be required; a \$300,000 facility is expected to be built when approximately two-thirds of the Master Plan land uses have been developed. The community will be expected to provide or pay the cost of any needed facilities.

6.12.2 Operations and Maintenance

Police and Fire

Police and fire service will initially be provided through ~~an~~ agreements with the San Joaquin County Sheriff's Department and the Tracy Rural Fire Protection District. ~~A start up police patrol of six deputies will be provided as the first few homes are developed. After the population reaches approximately 4,000, an additional deputy will be added for roughly each additional 670 person increase in population.~~ A lieutenant and several sergeants are assumed to be added to the police force serving Mountain House. The fire stations currently ~~staffed~~ manned by the Tracy Rural Fire Protection District are adequate to provide the response time for initial protection requirements in the first phase of development. Staffing levels will be increased as the population in the community increases to maintain a required level of service of approximately three professional firefighters per engine company. A total of four engine companies are expected to provide service out of the two permanent fire stations.

Maintenance of police and fire stations and vehicles will be the responsibility of the agency providing the service. Costs for both operations and maintenance are factored into the fiscal analysis in the PFP.

Medical Services

As discussed above, hospital and medical care will be provided by private operators. Paramedic service will be provided through the fire protection service provider.

Animal Control

Staffing, etc. for animal control will be provided by the County either directly or through a contractual agreement as the need arises.

Waste Management

Waste management is assessed to be contracted through private vendors, who will collect fees for providing the service. Therefore, there are no costs included in the fiscal analysis for waste management services. Any transfer of this service to the community assumes that it would only be done if it provided for cost savings and fees for the construction of facilities.

6.14 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Location of Fire Stations. Fire stations shall be strategically located so as to offer adequate fire protection to all portions of the community. Precise siting shall be determined in the Fire Protection Plan and the applicable Specific Plan.
- b) Marina. When the marina is constructed, the Fire Protection Plan shall be amended to include provisions to patrol the Mountain House marina and the immediate vicinity of the marina. The Specific Plan which includes the marina shall include provisions for marine patrols.
- c) Special Security Issues. Each Specific Plan shall address any special security issues unique to its area, unless adequately addressed in the Park and Open Space Plan.
- d) Buffer Zones along Railroads. Specific Plans shall establish buffer zones between structures proposed in areas adjacent to railroads and the track right-of-way to reduce potential public safety impacts from railway accidents. The Specific Plan for Neighborhood J shall include safety criteria for determining buffer zone widths north of Byron Road where residential uses are proposed.
- e) Requirements for Businesses along Railroads. Specific Plans shall contain requirements for businesses and public institutions located adjacent to the railway buffer zones to maintain emergency contingency and evacuation plans in the event of a railway accident.
- f) Pipelines Site Assessments. For areas located within 500 feet of any pipeline, a preliminary site assessment shall be prepared prior to submittal of each Specific Plan ~~the first Development Permit~~ by a qualified professional in compliance with the requirements of the County Environmental Health Department. If contamination is identified, an investigation and remediation shall be undertaken in accordance with the requirements of the County and the Regional Water Quality Control Board.

- g) Mapping of Pipelines. Figure 1.8: Pre-Development (1993) Site Constraints provides a map showing the general location of all existing and abandoned fuel lines. For areas located within 500 feet of any pipeline, more detailed and accurate mapping of pipelines shall be provided and the potential impact of the fuel lines on the area shall be assessed. For Specific Plan I, the map and assessment shall be prepared prior to submittal of the first Development Permit. Other Specific Plans shall include a map and assessment.
- h) Relocation of Weber-Herdlyn Line. The 60-kV Weber-Herdlyn line shall be relocated to an alignment that parallels the Mococo Railroad line. The proposed realignment shall be shown in the first residential Specific Plan north of Byron Road. The alignment will be located as far as possible from any residential land uses and will be relocated prior to the issuance of any residential building permits north of Byron Road.
- i) Site Assessment for Dairy Operations. Specific Plans shall address existing dairy operations within 1000 feet of proposed residential development to determine if such a development would be impacted by the proximity of the dairy operations.
- j) Residential Setbacks from Powerlines. Additional setbacks for residential uses shall be established if future research indicates that such setbacks are necessary to ensure the public health and safety. Each Specific Plan adjacent to the Rio Oso-Tesla easement that contains residential development (i.e., Neighborhoods A, B and D) shall include an analysis of potential EMF hazards for residential uses using the best available information. If indicated, appropriate setbacks from the powerline easement shall be established for these neighborhoods at the Specific Plan stage.

CHAPTER SEVEN



RECREATION AND OPEN SPACE

CHAPTER SEVEN: RECREATION AND OPEN SPACE

7.1	INTRODUCTION	1
7.2	PARKS AND RECREATION	1
7.2.1	Assumptions and Definitions	3
7.2.2	Recreation System	4
7.2.3	Neighborhood Parks	7
7.2.4	Mountain House Creek Community Park	9
7.2.5	Other Community Parks	17
7.2.6	Old River Regional Park	19
7.2.7	Pedestrian Paths	24
7.2.8	Private Recreation	26
7.2.9	Other Open Space	27
7.3	BIOLOGICAL RESOURCES MANAGEMENT	27
7.3.1	Introduction	27
7.3.2	Habitat Management Plan (HMP)	27
7.3.3	Swainson's Hawk	31
7.3.4	San Joaquin Kit Fox	36
7.3.5	Other Special-Status Species	37
7.3.6	Wetlands Management	39
7.3.7	Tree Mapping and Conservation Policy	41
7.4	CULTURAL RESOURCES	43
7.5	PHASING AND COSTS	44
7.5.1	Capital Facility Cost and Phasing	44
7.5.2	Operations and Maintenance	46
7.6	SPECIFIC PLAN REQUIREMENTS	46

List of Figures

Figure 7.1: Recreation and Open Space Plan	2
Figure 7.2: Open Space Destinations and Linkages	6
Figure 7.3: Neighborhood Park Concept	8
Figure 7.4 : Mountain House Creek-North and South	14
Figure 7.5 : Mountain House Creek at Town Center	15
Figure 7.6: Old River Regional Park Diagram	21
Figure 7.7: Old River Regional Park Sections	22
Figure 7.8: Swainson's Hawk Sightings	34
Figure 7.9: 1993 Tree Locations and Wetlands	42

List of Tables

Table 7.1: Recreation and Open Space Areas	1
Table 7.2: Mountain House Parks and Open Space Plan	3
Table 7.3: Proposed Swainson's Hawk Mitigation Program	35
Table 7.4: Costs for Recreational Facilities	45

CHAPTER SEVEN: RECREATION AND OPEN SPACE

7.1 INTRODUCTION

This chapter addresses recreation facilities and open space issues for the Mountain House community. Recreational elements include active uses such as public parks and private recreational facilities. Important open space elements addressed here are management of biological resources including sensitive wildlife species, agricultural lands preservation, Mountain House Creek, and Old River.

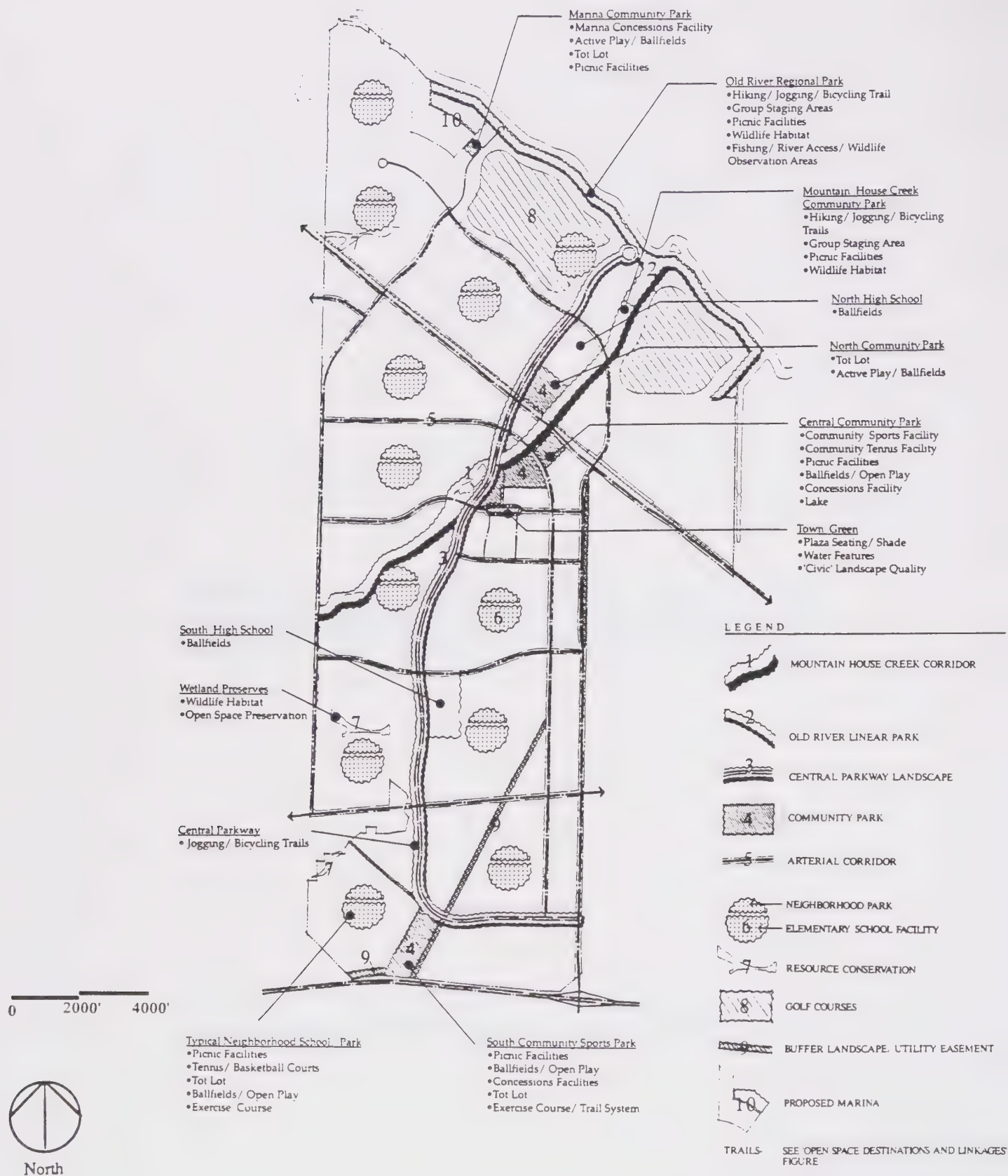
Chapter Four: Development and Design, provides additional standards for landscape corridors including streets, gateways and entries, windbreaks, powerline corridors, open space setbacks, and community edges. Chapter Nine: Transportation and Circulation, contains provisions for bicycle and pedestrian circulation.

7.2 PARKS AND RECREATION

Open space and recreational areas comprise approximately 16% of the Mountain House community (see Table 7.1: Recreation and Open Space Program and Figure 7.1: Recreation and Open Space Plan). Recreational facilities at Mountain House will include both public parks and private uses, namely two golf courses and a marina. Other open spaces include wetlands, easements, and landscape buffers.

Table 7.1 Recreation and Open Space Areas (Note: Acreages are approximate)		
Neighborhood Parks	60.0 acres	7.9%
Mountain House Creek Community Park	80.5 acres	10.5%
Other Community Parks	99.0 acres	13.0%
Old River Regional Park	70.0 acres	9.2%
Wetlands	23.0 acres	3.0%
Golf Courses (2)	301.5 acres	39.5%
Marina/other open space	62.0 acres	8.1%
Easements	64.0 acres	8.4%
Landscape Buffers	3.0 acres	0.4%
Total	763.0 acres	100%

11/4/93



The Master Plan establishes the general policies for recreational sites and uses within Mountain House. Additionally, a comprehensive Parks and Open Space Plan and Specific Plans will provide more detailed information and requirements for the park system. Table 7.2 summarizes the types of information which shall be provided by the Master Plan, Parks and Open Space Plan, Specific Plans and Constructions Plans.

Table 7.2 Mountain House Parks and Open Space Plan					
	Master Plan	Parks and Open Space Plan	Specific Plan I	Other Specific Plans	Tentative Map / Develop. Plans
General Park and Recreation Policies	♦				
Detailed Park and Recreation Policies		♦			
Locations of Park Sites	♦				
Park Facility Standards		♦			
Facilities Component		♦			
Conceptual Park Plans		♦	♦		
Preliminary Park Plans		♦ (for SP-I)		♦	
Park Construction Plans					♦

2/9/94

7.2.1 Assumptions and Definitions

The following definitions apply to park plans and drawings as discussed in this chapter.

- a) Conceptual Plans. Conceptual Plans are intended to be an illustrative, generalized concept for the development of park sites. These plans will include, at a minimum, a plan view drawing indicating the anticipated layout of recreational facilities, access, edge treatments, landscape concepts and interface with anticipated adjoining land uses.
- b) Preliminary Plans: Preliminary Plans will provide more detailed illustrative plan information, indicating the following, as appropriate:
 - the boundaries and configuration of the site,
 - location of adjoining Collector streets,
 - layout of recreation facilities identified in the facilities component for the site,

- vehicular and pedestrian access and connections,
 - edge treatments,
 - schematic landscape concepts,
 - interface with adjoining uses
 - functional relationships of areas within and adjacent to the park
 - parking areas
 - special features such as overlooks, boat launches, fishing platforms, etc.
 - buildings, restrooms, service and maintenance structures
- c) Construction Plans. Requirements for preparation, submittal and typical design standards shall be included in the Parks and Open Space Plan, including, as applicable:
- Design of softscape elements including layout of sports fields, clearing, grading, soil amendment, temporary and permanent irrigation, trees and other plant material including riparian vegetation, lakes or other water features.
 - Design of hardscape elements including, picnic tables and pavilions, pools and pool decks (if any) tot lots, hard court areas, trash receptacles, benches, concrete/AC paving, curbs and gutters, pedestrian bridges, parking lot lighting, and site and walkway lights.
 - Design of all buildings and structures including pavilions, restroom / concession facilities, community recreation centers, stadium and swim facilities
 - Design of features to protect and enhance wildlife and allow public observation and study.
 - Coordination with flood control design of levees and other flood control improvements.

7.2.2 Recreation System

Objective: To provide a full range of recreational facilities and open space areas in accordance with County standards and the needs of the community.

Policies:

- a) The Mountain House community shall incorporate a comprehensive system of regional, community and neighborhood parks at locations which serve every part of the community with recreational facilities and provide for preservation and enhancement of existing natural areas.
- b) The park system shall provide community focal points that are accessible to residential neighborhoods and complement other community programs, especially schools.
- c) The park system shall provide natural resource areas to preserve and enhance wildlife habitats and corridors, and create educational opportunities for the observation and study of the local ecology.

- d) The community's bicycle and pedestrian circulation system shall establish linkages between residential areas and open space destinations (see Figure 7.2: Open Space Destinations and Linkages; see Chapter Nine for further discussion of bicycle and pedestrian paths).
- e) The community shall maintain a combined community and neighborhood park ratio of not less than five acres per 1,000 population.

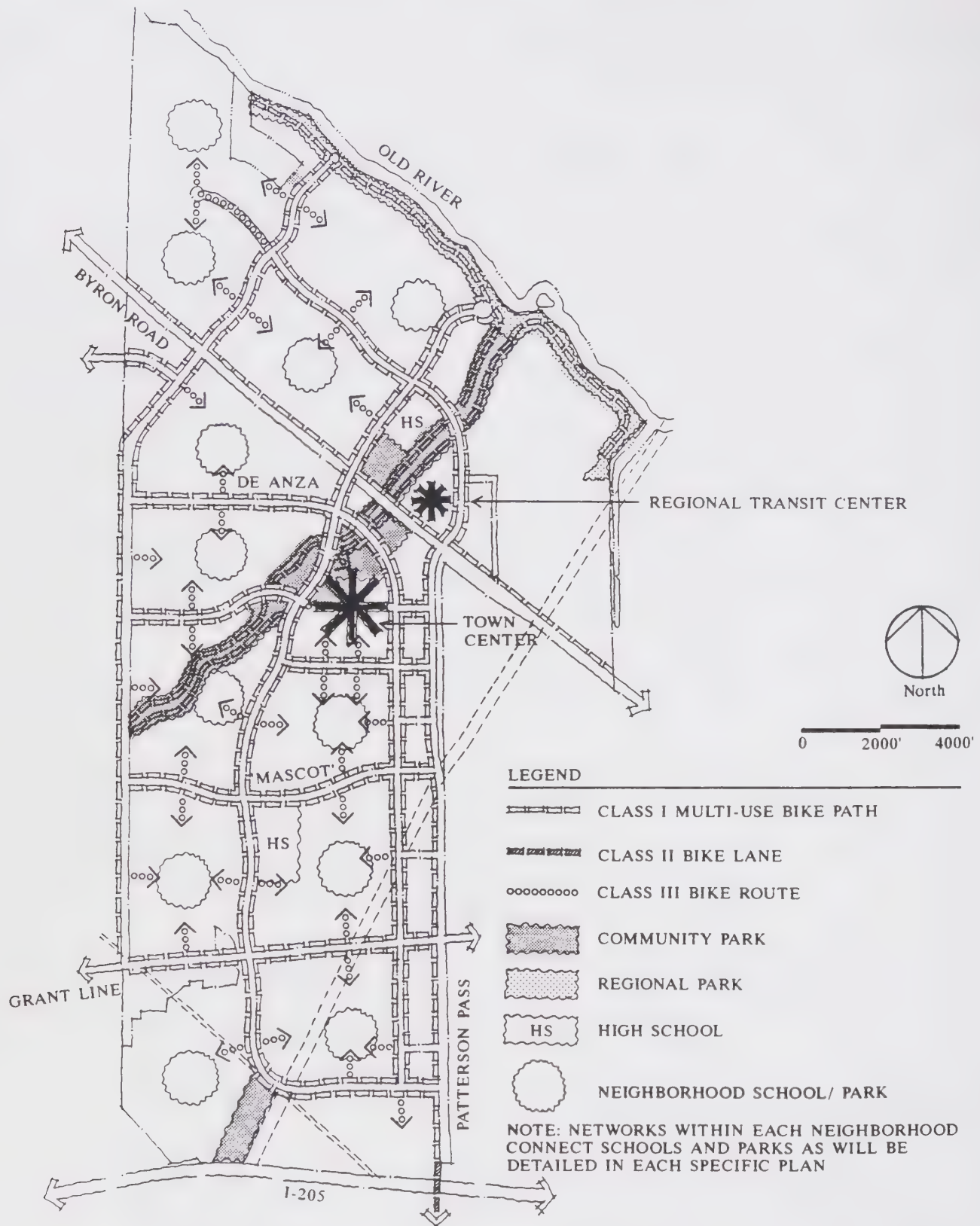
Implementation:

- a) Parks and Open Space Plan. A comprehensive Mountain House Parks and Open Space Plan shall be prepared. The Parks and Open Space Plan shall serve as the guiding document for recreational uses in Mountain House, and shall be approved prior to submittal of the first Development Permit.
- b) Park Facility Standards. The Parks and Open Space Plan shall discuss the recreation needs of a new community within the context of County standards and procedures. This will include projected buildout population and recreation trends.

The Parks and Open Space Plan shall establish the criteria for allocating recreational facilities throughout the community, and the programmatic requirements for each type of facility. The plan shall evaluate recommended standards from the National Recreation and Park Association (NRPA), along with those of at least two other new communities similar in size. Facilities to be addressed include such elements as tennis courts, ballfields, pools, parking, concessions, and play equipment. Anticipated demand shall be based on the projected population at buildout of each neighborhood.

The Parks and Open Space Plan shall include a facilities component for each park site providing a detailed list of the facilities planned for each park site, including mandatory and optional facilities.

- c) Park Policies. The Parks and Open Space Plan shall establish detailed policies for location of park sites, recreation programs, accessibility requirements, edge treatments interface with adjoining land uses or other issues identified by the Master Plan. It shall also address coordination with the construction of neighborhood transit centers. Where applicable, it shall provide for coordination between parks construction/management and flood control design of levees and other flood control improvements.
- d) Parks Plans and Maps. The Parks and Open Space Plan shall provide the following:
 - An overall Parks and Open Space Map showing the size and location of individual park sites, open space areas, and linkages.
 - A Conceptual Plan for the regional park, each community park and a prototypical neighborhood park.
 - A comprehensive Conceptual Plan for Mountain House Creek which addresses the multiple concerns for the creek corridor, including recreation, riparian areas, habitat values, stormwater management and phasing of improvements.

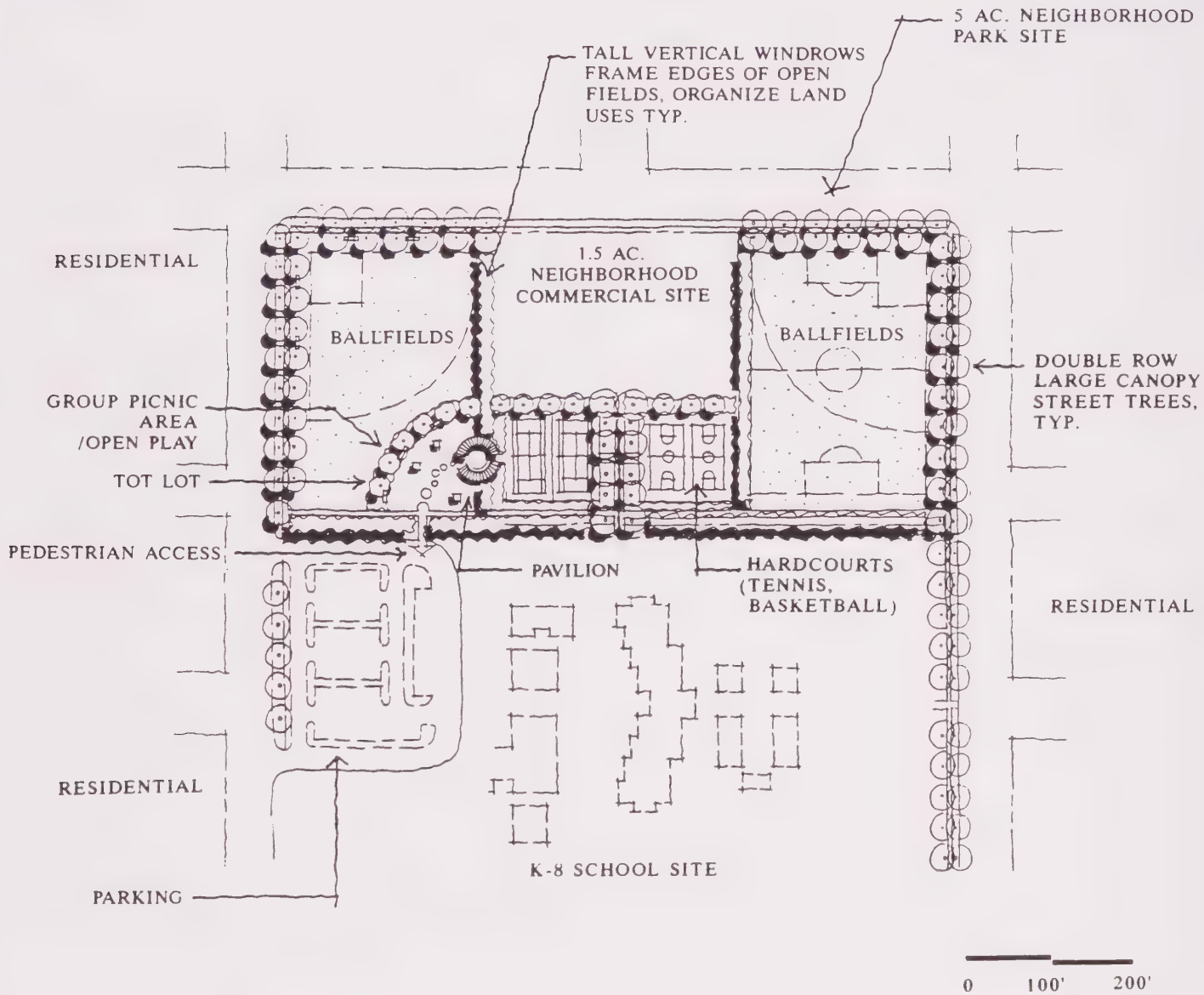


- e) Old River Regional Park. The Parks and Open Space Plan shall include a Concept Plan for the Old River levee area, Mountain House Creek and Dredger Cut which addresses flood control, public recreation, interim park fees, access to Old River, parking, and habitat issues.
- f) Parks Management and Implementation. The Parks and Open Space Plan shall address parks management, implementation and maintenance issues including:
 - Management strategies for recreation programs.
 - Implementation of the park and open space system within the new community, including phasing, timing and responsibilities of all park improvements, and criteria for maintenance of all park and open space facilities.
 - Funding of park construction and maintenance.
 - Provisions for equipment, facilities and staffing.
 - A ~~structure~~ formal agreement for joint use of parks and recreation facilities with schools, to coordinate programs and activities and enhance public access. The Special Purpose Plan for the first Neighborhood Center will formalize the coordination of shared facilities and designate the agency responsible for making final determinations on joint use issues.
 - Requirements to monitor the community's recreation needs on a regular basis and review the adequacy and operational character of individual parks and facilities.
 - Requirements, standards, typical details, timing and responsibilities for submittal of construction plans (see Section 7.1, above).
- g) Trails. For Mountain House Creek Park, Old River Regional Park and any regional trails, the Parks and Open Space Plan shall provide for the design of trails, including alignment, signage and location of trailheads. The plan shall also outline criteria for trail planning and design, management, trail naming and trail use.
- h) Specific Plan Requirements. Public parks, open space areas and recreational facilities shall be addressed by the Specific Plans in which they are located or as specified in the Parks and Open Space Plan. With the exception of Specific Plan I, Specific Plans shall include a Preliminary Park Plan for each park site within the Specific Plan Area (see Table 7.2). For parks within the Specific Plan I, Preliminary Park Plans shall be provided as part of the Parks and Open Space Plan.

7.2.3 Neighborhood Parks

The Land Use Plan locates 12 five-acre neighborhood parks adjacent to K-8 schools at the center of each of the 12 residential neighborhoods. This proximity is intended to increase the usability of park open space and reduce overall operation and maintenance costs.

Figure 7.3: Neighborhood Park Concept provides an illustrative concept plan of a typical neighborhood park.



Objective: To provide neighborhood parks that will serve all local residents, including toddlers, young children, teenagers, adults, parents with infants, and senior citizens.

Policies:

- a) A neighborhood park of approximately five acres in size shall function as a central element within each residential neighborhood, with easy access by bicycle, sidewalk, trail system, and the local street system from every part of the neighborhood.
- b) Neighborhood parks shall be located on a Collector street within a half mile of residences within the surrounding neighborhood.
- c) Crossing of Major Arterial streets shall not be required to travel from any part of the neighborhood to the neighborhood park.
- d) Neighborhood parks shall be sited and designed to maximize their visibility along local streets and thereby enhance the public right-of-way and neighborhood character.
- e) Neighborhood parks shall be located adjacent to K-8 schools. Parking facilities shall be shared between the school and park. School and park recreational programs shall be coordinated.
- f) Neighborhood parks shall be designed and maintained to provide for active and passive uses. Examples of active uses could include field games, court games, exercise courses, pools, and tot lots. Examples of passive uses are picnicking, crafts, and landscaped open spaces. The parks may also provide support facilities such as parking, storage facilities and picnic structures.
- g) See also policies regarding schools and Neighborhood Parks in Chapter Five: Education and Child Care.

Implementation:

- a) Parks and Open Space Plan Requirements. See Section 7.2.2: Recreation System.
- b) Timing of Neighborhood Parks. Construction of neighborhood parks shall begin after 50% of the dwelling unit permits for each neighborhood have been issued and shall be completed by the time 80% of dwelling unit permits for the neighborhood have been issued. Further provisions for timing of Neighborhood Parks shall be established by the Parks and Open Space Plan.

7.2.4 Mountain House Creek Community Park

Approximately one half of the 180 acres of community park acreage forms a linear park along Mountain House Creek, establishing the primary open space spine through the community (see Figure 7.1).

Mountain House Creek runs northeast/southwest through the Master Plan area. The creek corridor presents an opportunity for creation of wildlife habitat and recreational activities. Existing wildlife habitat along the creek is limited due to decades of agricultural practices, and no existing recreational use of the creek occurs due to the intensity of farming, limited access, and poor habitat value.

Prior to development of the community, Mountain House Creek contains about eight acres of freshwater marsh (based on the Corps-approved delineation). These marshes may be primarily the result of irrigation practices with the perennial marshes confined to the open expanses behind the earthen berms and the seasonal marshes as a result of irrigation. The riparian woodlands on-site (with the exception of Old River) are in a degraded condition, with more introduced species than natives. The remainder of the creek is relatively narrow without the width and diversity of channel form needed to provide for a high value riparian system.

The existing pastures (both on- and off-site) are a major source of pollution to Mountain House Creek. Out-of-bank flooding, primarily a result of off-site flows, is common during major storms due to the narrowness of the creek channel. The movement of most floodwaters out of the channel robs the corridor of sediment transport capability and nutrient enrichment.

Possibilities for enhancing the creek corridor lie with reconstruction of riparian areas. Much of the value of riparian areas is derived from the shallow flow or ponding of water through a gently-sloped channel and the extent of woodland cover. The combination of shallow water and vegetation cover can remove pollutants from the water, increase nutrient production, flood storage and groundwater recharge, reduce storm erosion, create waterfowl and shorebird habitat, and provide passive and active recreation.

Habitat values of riparian landscapes are primarily determined by the diversity of habitats within the system. A high value system for wildlife would contain perennial and seasonal marshes and several classes of riparian woodlands in a matrix of native grasslands.

Use of the creek corridor for flood control as well as wildlife habitat requires careful consideration of the impacts of flood-related sedimentation and erosion on areas which have been landscaped for habitat purposes. As discussed in Chapter Fifteen: Storm Drainage and Flood Protection, the creek is designed to reduce erosion and sediment flow to infrequent major storm events when high flows reduce the possibility of sediment deposition, thereby allowing the floodplain to double as a natural wildlife area and community park.

Figures 7.4 and 7.5 illustrate the proposed design of Mountain House Creek corridor. Appendix 7-A: Mountain House Creek Planting and Restoration Measures provides additional information on planting within the creek corridor. Section 15.6: Mountain House Creek Improvements provides a discussion and provisions on critical issues of sedimentation, erosion, storm flow, and protection of wetlands and streambanks. Section 9.8.2: Pedestrian Facilities, and Figures 9.30: Bicycle and Pedestrian Network and 9.31 Bicycle and Pedestrian Walk and Path Standards illustrate the general location and standards for trails within the creek corridor.

Objective: To restore the Mountain House Creek corridor to a diverse riparian system dominated by native species and protected from inappropriate uses or activities.

Objective: To establish a community park and creekside landscape along Mountain House Creek which will serve as the central open space spine for the entire community and provide passive recreational opportunities, open space connections, wildlife habitat, and flood control.

Policies:

- a) Creek design and management shall integrate the multiple purposes of flood control, wildlife habitat, and recreation. Recreational facilities shall be provided to serve the phased development of adjacent residential development. See Chapter Fifteen: Storm Drainage and Flood Protection (Section 15.11: Phasing and Costs) for further information on phasing.
- b) Community parks shall include a linear park along Mountain House Creek. This linear park shall provide continuous trail access along the creek through the entire community and connect to the regional park at Old River.
- c) The existing Mountain House Creek channel and adjacent marshes shall be retained to the maximum extent practicable.
- d) A diverse riparian system shall be created ~~restored~~ throughout the proposed creek corridor which will be self-sustaining to the maximum extent practicable.
- e) Flood protection of adjacent lands and infrastructure shall be provided while minimizing damage to the creek.
- f) Recreational uses consistent with the protection of created and preserved habitats shall be provided. Active use areas within community parks shall be located to preserve sensitive habitat areas.
- g) The creek corridor shall be properly buffered from or integrated into the land uses adjacent to the corridor. All buildings shall be setback from the edge of the corridor a minimum of 50 feet.
- h) The impact of infrastructure crossings of the creek shall be minimized.
- i) All stormwaters draining to the creek shall be subject to Best Management Practices prior to their entry into the main creek channel.

Implementation:**General Requirements**

- a) To ensure that the different functions of the Mountain House Creek corridor are coordinated, the corridor shall be overseen and managed as a single multi-use program integrating and coordinating requirements for 100-year flood protection, opportunities for flood control, development and protection of riparian values and wildlife habitat, and enhancement of recreation. Creek improvements shall be constructed as described in Chapter Fifteen: Storm Drainage and Flood Protection (Section 15.11: Phasing and Costs).
- b) The restored creek corridor shall include perennial and seasonal marshes and several classes of riparian woodlands in a matrix of native grasslands (see Figures 7.4 and 7.5).
- c) Since summer and fall flows will be crucial to the maintenance of wetlands in the creek corridor, all practicable measures shall be employed to provide a greater average annual flow consistent with flood requirements.

- d) Each Specific Plan which includes a portion of the creek shall include a specific restoration plan for that portion of the creek based on these goals, and the requirements of the Parks and Open Space Plan. The restoration, improvement and phasing shall be coordinated with required drainage and flood control improvements.
- e) The creek shall be designed to meander through the creek corridor in order to provide greater aesthetic and wildlife values. The creek corridor shall be a minimum of 200 feet in width, but within that corridor the creek may meander from side to side reaching as close as 50 feet from the corridor edge.
- f) Both preservation and re-creation of existing wetlands shall be addressed in the applicable Specific Plan as described in Section 7.3.5: Wetlands Management.

Landscape Design Requirements

- g) The creek landscape shall create three distinct landscape zones: the upper zone, Town Center zone and lower zone, progressing from a generally drier landscape regime in the upper reaches to a generally "wetter" landscape in the lower portions (Figures 7.4 and 7.5).
- h) Overall, the corridor shall be designed to create a natural, tree-shrouded corridor along the creek channel, with intermittent expanses of open areas between the channel and adjacent development.
- i) The upper landscape zone shall create a predominantly oak savanna landscape along the margins of the corridor with willows and other riparian species near the channel and lower terrace areas.
- j) The Town Center zone shall enhance the existing seasonal and perennial wetlands and create a mixed oak woodland and large deciduous tree landscape near the edges of roadways and development parcels.
- k) The lower landscape zone shall utilize primarily riparian and wetland plant species.

Planting Requirements

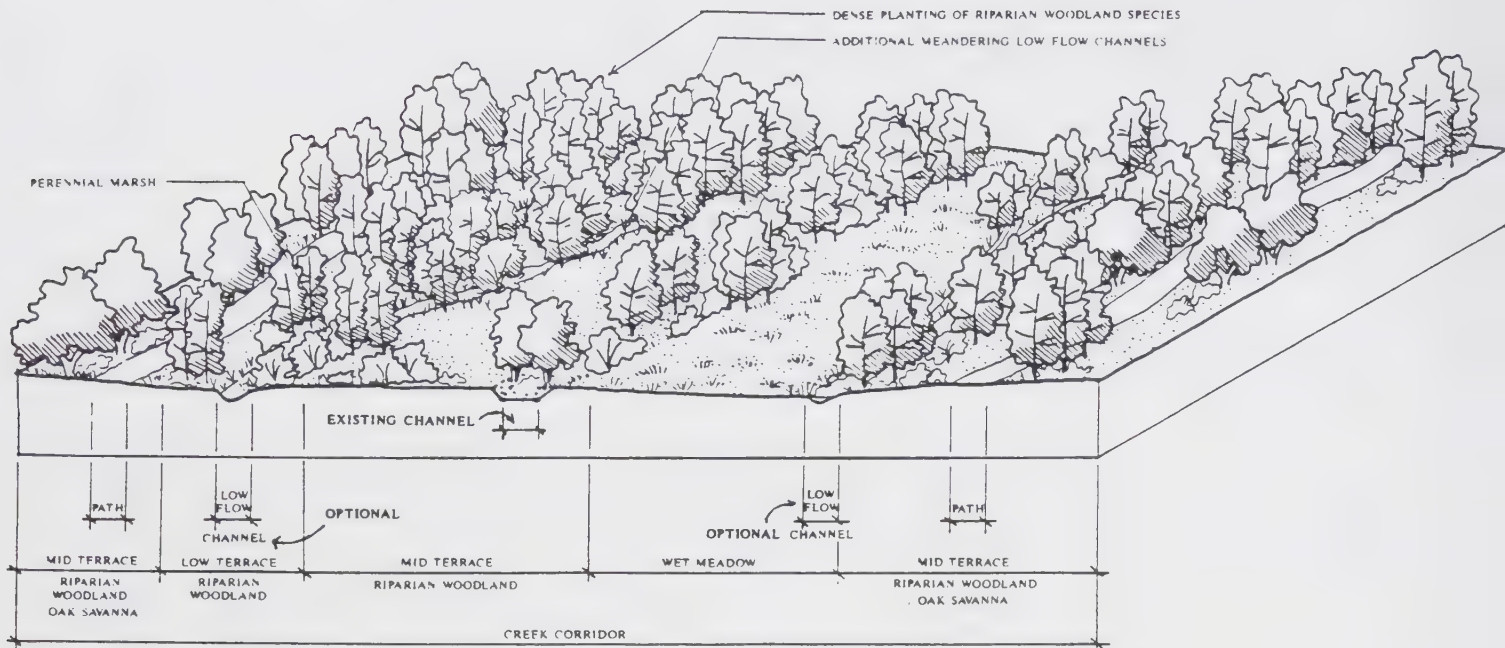
- l) Where appropriate and feasible, perennial marsh shall be created within the creek corridor. Permanent open water may be provided in areas designated for perennial marsh. See Appendix 7-A for further information.
- m) Efforts shall be made to plant rare perennial marsh species which occur in this region such as California hibiscus (*Hibiscus californicus*) and Sanford's sagittaria (*Sagittaria sanfordii*).
- n) Planting within the creek corridor shall be accomplished according to the provisions outlined in Appendix 7-A: Mountain House Creek Planting and Restoration Measures.

Flood Control Requirements

- o) Increasing the channel width and excavating a low terrace shall be used to provide flood conveyance and increase wildlife habitat. See Chapter Fifteen for storm flow considerations in the design of the creek channel.

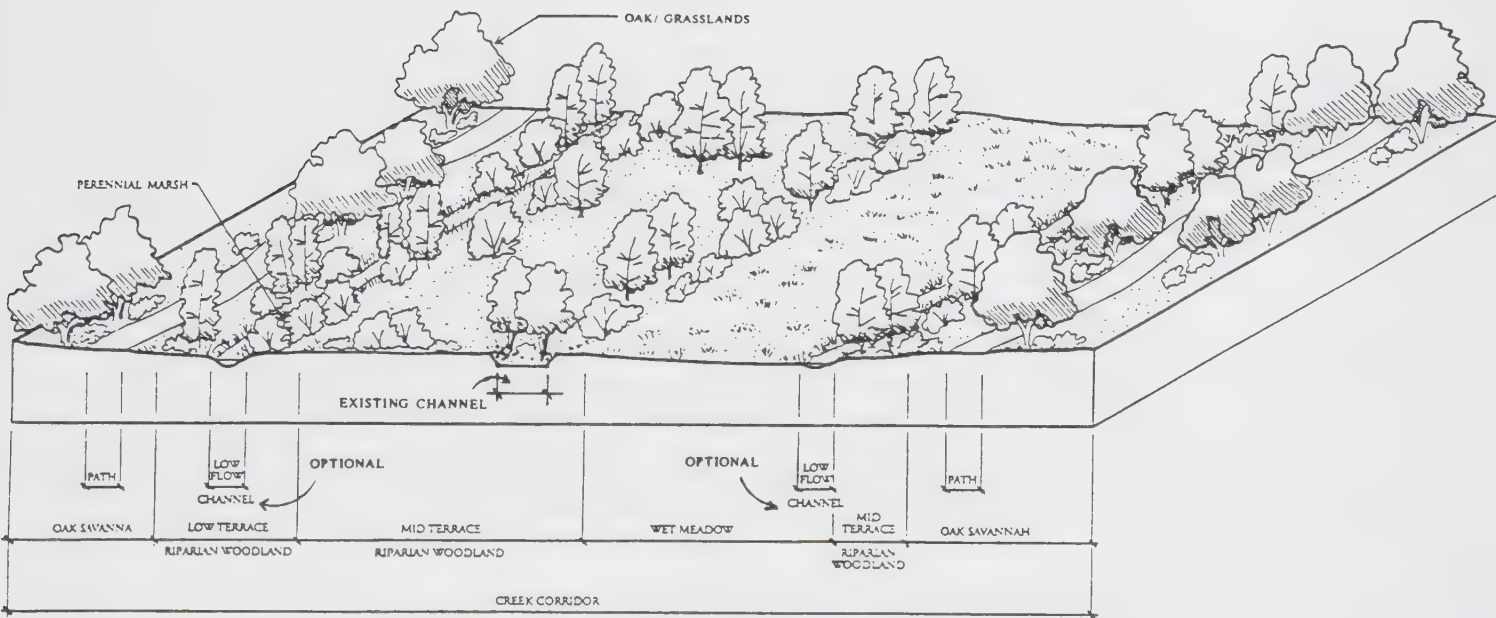
Park and Recreational Requirements

- p) The restored Mountain House Creek corridor shall accommodate multi-purpose trails, picnic areas, and similar passive recreational uses throughout its length (see Figures 7.4 and 7.5). Section 9.8.2: Pedestrian Facilities, Figures 9.30: Bicycle and Pedestrian Network and 9.31: Bicycle and Pedestrian Walk and Path Standards illustrate the general location and standards for trails within the creek corridor.
- q) Trails shall meander on the outside edge of the corridor and shall not encroach into the creek channel or other surface water features. Trails shall provide views of the creek and shall provide a sense of community participation without degrading the wildlife habitat value of the corridor.
- ~~q) Recreational uses shall generally be located at the perimeter of the corridor. Trails shall meander throughout the corridor to provide views of the corridor and a sense of community participation in the corridor habitats.~~
- r) Points of access to the creek itself shall be limited to street and selected pedestrian crossing areas. These areas may deliberately create a more formal and ordered landscape treatment in contrast with the natural creek corridor landscape. Staging areas shall include such facilities as parking, restrooms, trailheads with signage, and picnic facilities.
- s) Recreational activities shall be buffered from wetlands and sensitive wildlife habitats. These buffers may include vegetative screens or hedges composed of native plant materials which allow views but discourage access to sensitive areas.
- t) Educational signage shall be included within the creek corridor at appropriate locations to identify the values of the creek corridor and encourage its protection.
- u) A post-and-cable or similar barrier shall be provided along all creek corridor edges which front public spaces such as roads. Where multi-family residential, commercial, or public development will back up to the creek, "good neighbor" fencing (open fencing promoting views of the corridor) ~~may~~ shall be used to minimize the potential for dumping of debris and yard clippings into the corridor where private residential and commercial uses border the creek. Privacy fencing may be used where single family residential lots abut the creek corridor. Fencing along the creek shall allow for regular openings to permit pedestrian and visual access.
- v) See Section 7.2.2: Recreation System for the Parks and Open Space Plan and the Specific Plan requirements for Mountain House Creek Community Park. In addition to these provisions, all channel modifications, recreation improvements, wetland enhancement, and revegetation associated with the creek restoration component of the park plans shall be funded and installed concurrently with the Mountain House Creek flood improvements.



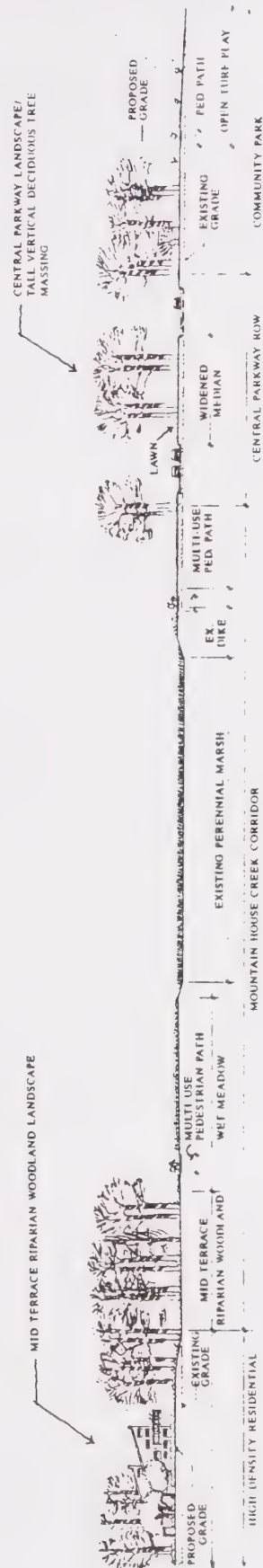
Mountain House Creek North of Town Center

LANDSCAPE DOMINATED BY RIPARIAN WOODLAND SPECIES/
NATIVE WILLOW, COTTONWOOD, AND ALDER



Mountain House Creek South of Town Center

LANDSCAPE DOMINATED BY OPEN GRASSLANDS/OAK



- w) A multi use path shall be constructed along each side of the Mountain House Creek corridor. The paths shall extend from Marina Boulevard to Old river. A minimum 16-foot right of way shall be reserved for each path. Within the right of way, a minimum eight-foot width shall be improved with asphalt, painted with a center stripe.
- x) The Mountain House Creek multi-use path shall be grade separated where it crosses the SP tracks.

Infrastructure Requirements

- y) Infrastructure crossings of the creek shall provide for at least two openings in any crossing to provide a movement corridor for wildlife. At least one opening shall be provided along each bank, a minimum of 12 square feet in cross-section (preferably about 3' x 4') above the ordinary high water line with earthen banks along at least one side of the opening.
- z) Roadway crossings of the creek shall minimize the length and width of the crossing as much as practicable. Road crossings shall be aligned and designed to avoid existing wetlands and avoid any discharge of dredged or fill material into the existing Mountain House Creek channel. These road crossings shall also be designed to eliminate the need for authorization by the Corps of Engineers.
- aa) Where practicable, openings in the deck of the roadway crossings shall be provided to create more light under the crossing, e.g., leaving the median open rather than creating an enclosed planting strip. The creek at either end of these crossings shall be planted to provide a natural, shaded transition zone from the more open creek to the shaded area underneath the crossing. Through flow of water shall be designed to prevent debris from clogging pipelines.

Water Quality

- bb) The storm water system shall provide for BMP pre-treatment of all urban, project-derived stormwater drainage prior to discharging into Mountain House Creek, the Old River, or other existing wetlands (as delineated by the Corps of Engineers). Wet or dry detention basins are generally the most efficient form of stormwater treatment and their use is consistent with wildlife uses and shall be allowed within the creek corridor (see Chapter Fifteen: Storm Drainage and Flood Protection).

Restoration Construction

- cc) Prior to any grading operations in the creek corridor, all habitats to be either preserved or salvaged shall be staked by an ecologist with easily observable flagging and pre-construction conferences held to ensure that grading contractors recognize the importance of these resources.
- dd) Grading operations shall ensure that soil does not spill into the existing marshes and fill existing wetlands, restrict flooding of the habitat, or reduce water quality. During grading, the overburden may be removed from the wetland edge backwards towards the uplands to create the marsh, as with a backhoe, or a berm may be left between the existing marsh and the construction area which would be removed in the last stages of construction.

- ee) The creek corridor restoration shall be periodically inspected by a qualified ecologist with proven successful experience in the areas of habitat development and wetland restoration. Inspection is divided into two phases. The first phase involves inspection of the construction project to ensure its compliance with the approved restoration program and relevant permits. The second inspection phase shall occur for five years after construction and shall review channel stability and sedimentation in the creek, water surface elevations and plant species richness and cover for the marshes, and plant height and vigor for the woodlands.
- ff) The project shall be evaluated against specific performance standards at the end of the fifth year of inspection.
- gg) Where the inspection program shows an unsuccessful conclusion, the CSD shall take action to correct that trend.

Timing

- hh) The Mountain House Creek Corridor shall be developed concurrently with adjacent residential development to provide recreational opportunities.

7.2.5 Other Community Parks

Other community parks are distributed throughout the Master Plan area to provide major, active recreational uses to all neighborhoods. Central community parks located in or near Town Center may include a 10-acre site intended for phased development with a lake and other facilities; a sports-related site of about nine acres; a three-acre town green within the Town Center; and a site of about 20 acres to support a possible stadium to serve the two community high schools and other events. Other parks provide recreation facilities near the northern high school and the southern portion of the community.

Objective: To establish community parks which serve the overall community with both active and passive recreational opportunities.

Policies

- a) Community park planning for areas outside the creek corridor shall generally follow the conceptual program summarized as follows.
 - Approximately 40 acres of community parks shall be located within and/or adjacent to the Town Center, reinforcing the community focus of the downtown. The 12-acre community park parcel just south of Byron Road and adjacent to Mountain House Creek Corridor Park shall contain up to three acres of shared public parking to be available for use for the transit center facility north of Byron Road, as well as for park uses.
 - A sports-related community park of about 20 acres shall be located adjacent to the northern high school.
 - A major active community park of approximately 35 acres shall be located south of Grant Line Road to serve that portion of the community with sports-related uses and provide a buffer to the transmission line and adjacent business park areas.

- A small water-oriented community park of about three acres may be allocated near the marina along Old River to provide unstructured recreation area with views of the marina.
- b) Community parks shall include both active and passive uses. Active area facilities shall include ballfields, pools, par courses, courts (hard-surfaced, sand or turf), trails, playgrounds, support structures such as restrooms and concession stands, and parking. Passive areas shall provide picnic areas, amphitheaters, gardens, vista points, and special features such as environmental sculptures, fountains and lakes.
- c) Where community parks are located in proximity to high schools, joint use shall be encouraged.
- d) A community park shall be sited in conjunction with the Town Center to encourage community events at this location. Major recreation facilities such as community centers or sports stadiums shall be located in community parks near the Town Center.
- e) Community parks shall be easily accessible from Arterial or Collector streets and from adjacent residential neighborhoods.
- f) A small sports stadium may be located in a community park near the Town Center. The stadium could accommodate about 5,000 to 6,000 people, be shared by the two high schools, and be used for community events such as concerts, parades, and local sports events.
- g) Community parks may also accommodate community centers for indoor facilities such as a multi-purpose gymnasium, and rooms for meetings, classes, banquets, childcare, games, arts and crafts, dance and exercise classes, kitchens, restrooms storage, offices, and lockers.
- h) Programming for community parks shall address the needs of the entire community, including families, singles, youths, seniors, disabled residents, and children.
- i) Wherever possible, parking facilities for community parks shall be located so as to provide shared-use opportunities with other public facilities such as transit, libraries and schools.

Implementation:

- a) Parks and Open Space Plan and Specific Plan Requirements. See Section 7.2.2: Recreation System.
- b) Timing of Construction and Plans. The Parks and Open Space Plan shall include a program for submittal of detailed design and construction plans, including the timing and responsibility for construction. First-phase development of sport fields for team play shall be provided prior to issuance of the 800th dwelling unit permit. These first-phase sports fields may be constructed on land reserved for the first high school and planned for subsequent use by the high school School District. The 11-acre community park, located at Central Parkway and Main Street and including interim playing fields, shall be constructed prior to the issuance of the 2,000th dwelling unit permit. Further provisions for timing of community parks shall be established by the Parks and Open Space Plan.

- c) Recreational Activities. Programming of recreational activities shall be provided to ensure full utilization of the community parks.

7.2.6 Old River Regional Park

The Master Plan designates a 70-acre riverfront park along Old River from the Westside Irrigation District Canal in the northeast to the proposed marina in the northwest part of the community. The regional park also includes the mouth of Mountain House Creek from the junction with Mountain House Creek Community Park to the Old River edge. It is anticipated that people throughout the southern part of the County will use the riverfront park.

Old River forms the northern boundary of the community. The riverfront represents one of the richest biological habitats and visual resources in the Master Plan area. Along the northeast side of the Old River levee is a narrow riparian area dominated by willow interspersed with blackberry, wild rose and an occasional white alder. The riverfront is more densely vegetated than other locations, and provides wildlife habitat for a number of species. The river itself offers boating access to the larger Delta system.

~~At present, however, the Old River levee does not contain significant natural habitat. Native woodlands, which would occur naturally in this area, are almost non-existent. The Old River levee presently is in degraded condition and does not comply with federal requirements for adequate 100-year flood protection of adjacent lands. Reconstruction of the levee in-situ to meet federal, state and local standards would cause significant impacts to Old River habitats.~~

Regional parks and access to the Old River and similar waterways currently are limited in the region. This Master Plan proposes that the an area including the Old River levee be utilized as a regional park for recreational and wildlife habitat purposes (see Figure 7.6: Old River Regional Park Diagram and Figure 7.7: Old River Regional Park Sections). Wildlife use of the Old River levee potentially is very high, due to the proximity of the levee to a perennial waterway.

Objective: To utilize the Old River levee for a variety of purposes suitable for a regional park, including regional recreation, wildlife and native plant habitat, and flood protection.

Policies:

- a) The waterfront of the Old River shall be utilized as a linear park and wildlife preserve offering access to the regional delta system and including facilities for picnicking, boating, fishing, trails, wildlife observation, and play areas.
- b) The Old River Regional Park shall provide a continuous trail for hiking and biking along its entire length, as well as sufficient access for maintenance vehicles. Public use shall be concentrated on the landward edge of the park with limited points of access to Old River rather than a linear accessway in close proximity to the Old River.
- c) The regional park trail system shall connect to the trails of the Mountain House Creek Community Park.

- d) The Old River Regional Park shall provide facilities for fishing, boat launching, viewing, and similar activities desirable at a waterfront location.
- e) Access to the general public shall be provided at two locations, from the extension of Central Parkway and near the marina.
- f) A levee along Old River shall provide for regional recreation uses and protection of adjacent lands from the 100-year flood event.
- g) The existing Old River levee and any land between the Old River levee and a new levee shall be dedicated primarily to natural habitat, excepting the access points described above and other minor uses such as fishing platforms. The new levee shall be constructed to provide 100-year flood protection (see Chapter Fifteen).
- h) Size and location of parking areas shall be adequate to provide for park users from within and outside the community.
- i) To the extent possible, recreational activities shall be buffered from wildlife habitats. These buffers could be vegetative screens or hedges composed of native plant materials which allow views but discourage public access. Man-made materials shall be avoided.

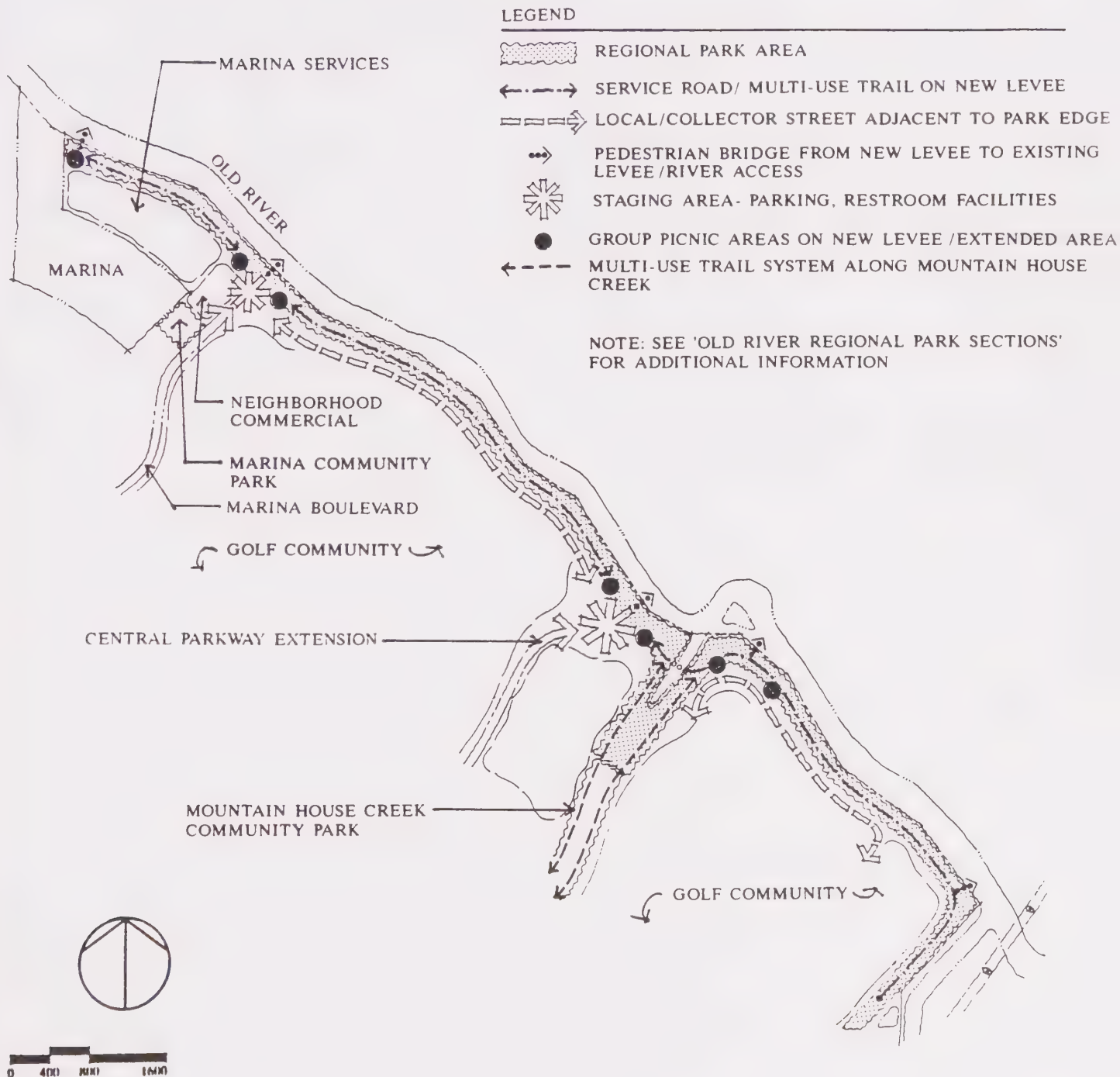
Implementation:

Overall Requirements

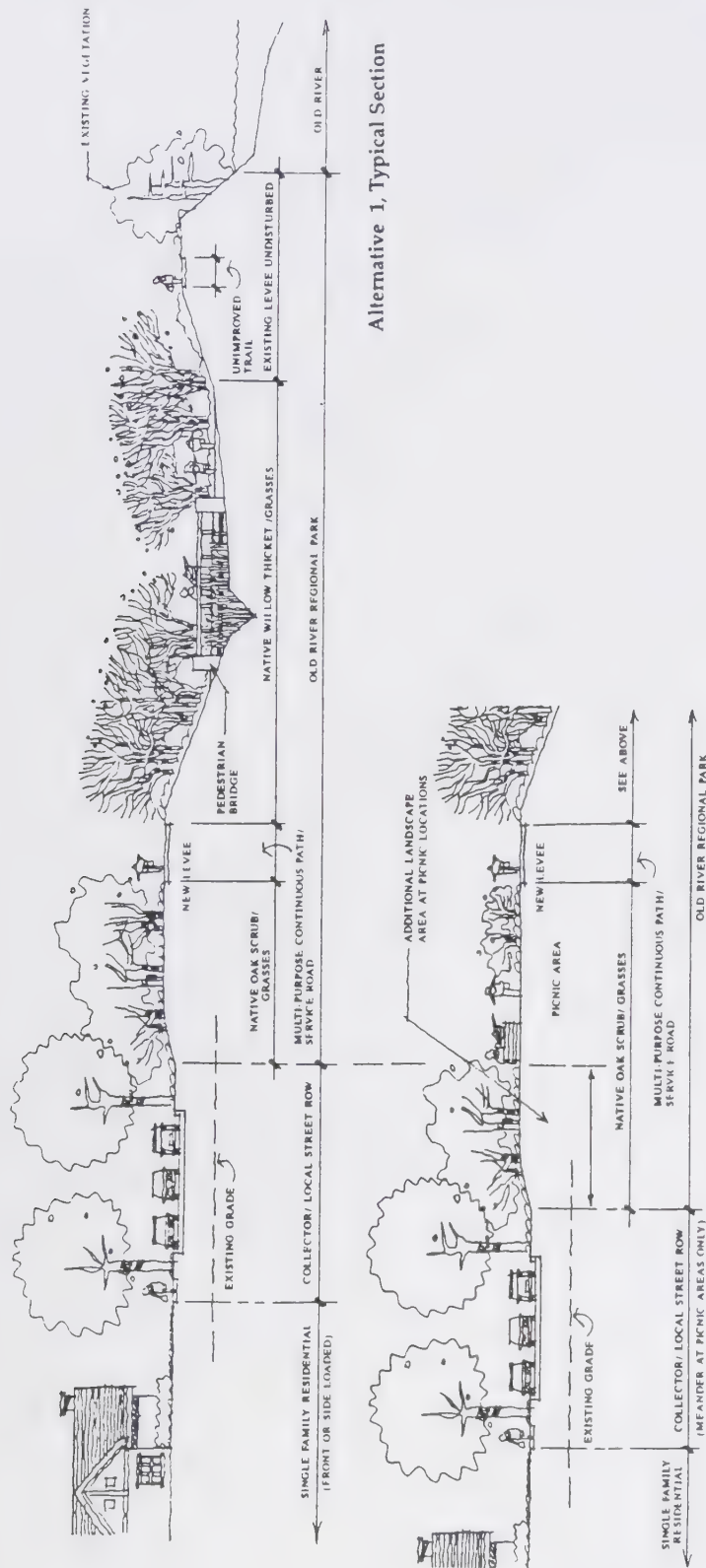
- a) Timing of Improvements. Timing, phasing and responsibilities for regional park improvements shall be addressed by the Parks and Open Space Plan. Construction may occur in phases. ~~tied to development of neighborhoods adjacent to Old River.~~

Flood Control Requirements

- b) Second Levee. A second levee, landward of the existing Old River levee, shall be constructed to provide appropriate flood protection. This levee will be integrated into the Old River Regional Park Plan. Vegetation on this levee shall be in conformance with the "Levee Encroachment Guide for Vegetation on Project Levees" adopted by the State Reclamation Board.



Old River Regional Park Diagram



Alternative 1, Typical Section

Alternative 2, Section at Picnic Area

Old River Regional Park Sections (Alternative 1 and 2)

Source: The SWA Group

September 16, 1994

Chapter Seven: Recreation and Open Space

Park and Recreational Requirements

- c) Parks and Open Space Plan and Specific Plan Requirements. See Section 7.2.2: Recreation System.
- d) Implementation of Parks Plan. The Parks and Open Space Plan shall include a program for the submittal of detailed design plans, which shall include all applicable flood control provisions, the existing levee, and integration of the new second levee into the regional park plans. Provisions for water access shall also be addressed.
- e) County Regional Park Requirement. ~~When the County implements an overall County-wide regional park program, Mountain House shall comply with the provisions of such a program. The proposed on-site 70-acre regional park shall fulfill the community's requirements for the provision of regional parks. be credited toward the community's requirements for any future County-wide regional park program.~~
- f) Educational Signage. Educational signage shall be included within the park at appropriate locations to identify the values of the Old River and encourage its protection.
- g) Old River Path. A multi-use path shall be constructed along Old River, extending from the west to east boundaries of the community. A minimum 20-foot right of way shall be reserved for the path.. Within the right of way, a minimum 12-foot width shall be improved with asphalt, which shall be striped to designate pedestrian and bicycle travel lanes.

Habitat Enhancement Requirements

- h) Woodlands. The woodland portion of the park design shall be planted in a variety of native riparian and oak woodland species.
- i) Riparian Woodlands. Species acceptable for planting in the riparian woodland area should include the species listed in Appendix 7-A, and other species native to the region and ecotype.
- j) Grasslands. Grassland dominated by native species indigenous to the region shall be restored wherever practicable within the park.
- k) Landscape Treatment. The landscape treatment of the linear park shall incorporate the following:
 - Landscape design shall create three distinct zones: the southern levee area, the middle area between levees and the river edge zone (see Figures 7.6 and 7.7).
 - The southern levee area shall be planted with mixed oak woodland and riparian tree and shrub species, with localized areas of lawn.
 - The middle zone shall consist of riparian and seasonal or perennial wetland plant species in the low areas, and grasses, shrubs or other woody species on the levee slopes.

- The river edge zone shall utilize riparian species and augment the existing vegetation adjacent to Old River.

Operational Requirements

- l) Pre-Grading Requirements. Prior to any grading operations adjacent to Old River, all habitats to be either preserved or salvaged shall be delineated ~~staked~~ by an ecologist and staked with easily observable flagging. ~~and pre-construction conferences held to ensure grading contractors recognize the importance of these resources.~~
- m) Grading Requirements. Grading operations shall be conducted so as to ensure that soil does not spill into Old River.

Maintenance and Monitoring Requirements

- n) Maintenance Manual. To ensure that long-term maintenance practices continue which support the purposes of the Old River enhancement program, a maintenance manual shall be developed for use after completion of construction of the regional park, including natural habitats. The manual shall detail maintenance procedures such as erosion control, debris removal, exotic plant eradication, irrigation guidelines, species cultural requirements, replanting, protective fencing, if necessary, and signing. A separate section of the manual shall detail maintenance procedures for the Old River levee which are acceptable to appropriate federal, state, and local agencies.
- o) Corrective Actions. If natural habitats within the regional park are not meeting the policies in this Master Plan, ~~and~~ relevant corrective actions shall be taken.

7.2.7 Pedestrian Paths

Figure 7.2 illustrates the major open space destinations and linkages within Mountain House. Chapter Nine contains additional descriptions of pedestrian and bicycle circulation. Policies for regional trail linkages are provided below. Regional trails include those planned by the East Bay Regional Park District, the Livermore Area Park and Recreation and Park District, and the National Park Service.

As of July 1993, the East Bay Regional Park District's Master Plan indicates a potential regional trail along the Southern Pacific Railroad/Byron Road. The Livermore Area Recreation and Park District indicates a potential trail corridor leading from Bethany Reservoir generally in the direction of Mountain House. Other potential trails could connect to nearby open space destinations such as Brushy Peak, located in Alameda County near the Contra Costa County border west of Mountain House, or the Bethany Reservoir.

The National Park District has considered extending the De Anza Trail, a National Historic Trail, into San Joaquin County at or near the Mountain House area. As of July 1993, the National Park District had no plans to extend the De Anza Trail into San Joaquin County.

Objective: To establish a network of paths that provide pedestrian and bicycle connections to open space and other destinations within Mountain House.

Objective: To connect the Mountain House pedestrian and bicycle circulation system to future potential regional trail alignments.

Policies:

On-Site Paths

- a) Class I multi-use paths shall be separated from vehicular traffic by a curb, landscaped strip or other buffer, or be routed through an open space area. Such paths shall safely accommodate both pedestrians and bicyclists, and motorized vehicles shall be prohibited (see Chapter Nine, Figure 9.30: Bicycle and Pedestrian Network and Figure 9.31: Bicycle and Pedestrian Walk and Path Standards).
- b) In addition to the multi-use paths, a bicycle circulation system consisting of Class II bike lanes and Class III bike routes shall be provided as described in Section 9.8.1: Bicycle Facilities.
- c) Interpretive Trails providing explanation of wildlife and other open space resources shall be addressed in the Parks and Open Space Plan.
- d) Signage and information shall be provided to orient users and promote better use of the pedestrian and bicycle system.
- e) Paths within Mountain House Creek Community Park, Old River Regional Park, Central Parkway and Marina Boulevard shall be interconnected to provide for easy access.

Regional Trails

- f) Future regional trails leading from Alameda or Contra Costa County to the Mountain House area shall connect to the pedestrian and bicycle network within the community. Potential regional trails include those planned by the East Bay Regional Park District and Livermore Area Recreation and Park District. Wherever possible, such trails shall provide access to destinations within Mountain House, including the Old River regional park and Mountain House Creek linear park.
- g) Should the National Park Service decide to extend the De Anza Trail into the Mountain House area, the trail shall be accommodated through connections to the Mountain House pedestrian and bicycle network, and identified with signage. The most likely alignment would be to provide trail routing along proposed Class I bike lanes that parallel Marina Boulevard from Kelso Road to Grant Line Road.

Implementation:

On-Site Paths

- a) Design. Design of paths, including alignment, standards, signage, location of trailheads or staging areas, and timing of construction and maintenance shall be provided in the Parks and Open Space Plan (see Section 7.2.2: Recreation System).

Regional Trails

- b) Trail Connections. Provisions for trail connections shall be included in the Parks and Open Space Plan. Specific Plans for the affected area shall incorporate

provisions of the Parks and Open Space Plan and provide for the design and location of regional trails and provide for linkages to destinations within the community, especially Mountain House Creek Community Park and Old River Regional Park. These trails include those planned by the East Bay Regional Park District, the Livermore Area Recreation and Park District, and the National Park Service (De Anza Trail).

- c) Coordination with Other Districts. There shall be ongoing coordination with the East Bay Regional Park District and the Livermore Area Recreation and Park District to insure that regional trails connections are maintained.

7.2.8 Private Recreation

The Master Plan allocates private recreation uses including two golf courses north of Byron Road and a 60-acre marina located along Old River in the northwest corner of the Master Plan area. In addition, private recreation facilities are expected to be constructed as amenities within neighborhoods, higher density residential complexes, or commercial areas.

Private neighborhood recreation facilities are encouraged to locate within discrete neighborhood units or high density residential complexes. Such facilities shall be in addition to required neighborhood and community parks. Private recreation facilities may include pools, small parks, tot lots/child play areas, community buildings or other facilities.

Other private recreation such as theaters, skating rinks, water slides, bowling alleys, and game centers are encouraged to operate in appropriate locations within the community.

Objective: To incorporate private recreation uses that will serve community residents and contribute to a high quality of life.

Objective: To minimize the potential for water quality degradation at the marina on Old River.

Policies:

- a) The marina along Old River shall include approximately 40 acres of water and 20 acres of land area for parking, boat launching, boat storage and service, and buildings. The marina shall provide public access from Mountain House to the waterways of the Delta system.
- b) The marina shall be designed and operated to minimize the potential for water quality degradation associated with inadequate water circulation or waste discharge.
- c) Golf courses shall include adequate acreage for clubhouses, parking, and full-length courses. The golf courses shall be accessible from Arterial streets and may be abutted by residential development.
- d) The golf courses may be publicly or privately owned and operated, and shall provide a distinctive open space and visual amenity for the community.

Implementation:

- a) Specific Plan Requirements. Golf course design criteria shall be provided by the Specific Plans for the golf course areas.
- b) Marina Design Criteria. Marina design criteria shall be provided by the Specific Plan for the marina area. The design of the marina shall include, if necessary, a forced circulation system capable of reducing the residence time of water in the marina to less than five days. The marina design and operation plan shall be presented at the Specific plan stage of Neighborhood K, which includes the marina.
- c) Waste Disposal Facilities. Convenient and adequate waste disposal facilities for human waste, bilge water, engine fuels, and lubricants, and garbage shall be incorporated in the marina design and operation plan.
- d) Construction. Construction of the marina shall be staged to delay breach of the Old River levee until construction of the marina basin is completed and stabilized. The Storm Water Pollution Prevention Plan for marina construction shall specifically require construction techniques to minimize erosion and sediment transport during and after breaching of the levee.

7.2.9 Other Open Space

Other open space areas within Mountain House are addressed in the following sections of this Master Plan:

Buffers and Edges - Chapter Four: Development and Design
Storm Drainage Easements - Chapter Fifteen: Storm Drainage and Flood Protection
Transmission/Pipeline Easements - Chapter Six: Public Health and Safety
Wetlands - Chapter Seven, Section 7.3: Biological Resources Management
Street Landscaping - Chapters Four: Development and Design (text) and Nine: Transportation and Circulation (figures)

7.3 BIOLOGICAL RESOURCES MANAGEMENT**7.3.1 Introduction**

The Mountain House lands provide habitat for a variety of species. ~~Appendix 7-B: Mountain House Species Status (October 1993), Preferred Habitats, and Survey Periods, lists special status species potentially occurring within the Master Plan area.~~ Sections 7.3.3: Swainson's Hawk, and 7.3.5: Other Special-Status Species, contain policies relating to impacts to Swainson's hawk and other special-status species, respectively. Section 7.3.4: San Joaquin Kit Fox, discusses the San Joaquin kit fox, which is not included in the Habitat Management Plan discussed in Section 7.3.2.

7.3.2 Habitat Management Plan (HMP)

This section addresses provisions for an HMP for enhancement of wildlife values, ~~wastewater reclamation, and~~ agricultural preservation, ~~and potential.~~

The HMP proposes an off-site program which ~~combines~~ includes the following elements:

- a) Mitigating Mitigation of impacts to wildlife that currently utilize the Mountain House agricultural lands for foraging and/or nesting as follows:
 - Swainson's hawk - nesting and foraging;
 - Northern harrier - foraging;
 - Black-shouldered kite - nesting and foraging; and
 - Tri-colored blackbird - foraging.
- b) Preservation of agricultural lands.
- c) Potential utilization of Utilizing reclaimed wastewater as a primary for agricultural irrigation. source.

~~The community~~ Implementation of this Master Plan will convert agricultural land to other uses. ~~Some~~ Most of this land also serves as habitat for wildlife (notably for nesting and foraging by Swainson's hawk and Black-shouldered kite, and foraging by Northern harrier, ~~Black-shouldered kites~~, Burrowing owls, and other raptors). The HMP has been designed primarily to address the habitat needs of the Swainson's hawk, for which specific mitigation is required. However, this habitat also will provide foraging and/or nesting opportunities for the other raptors listed above and potentially for the Tri-colored blackbird, for which there are no quantifiable mitigation requirements. The HMP does not address specifically the habitat and needs of the owl. See Section 7.3.5: Other Special-Status Species, regarding measures appropriate to the Burrowing owl.

The HMP provides the opportunity to integrate compatible uses to mitigate for impacts to existing wildlife habitat, preserve agricultural lands and productively utilize reclaimed wastewater. ~~The reclaimed wastewater shall irrigate crops, while these same~~ Agricultural fields can be cultivated while shall provide providing suitable habitat for the species identified above. Reclaimed wastewater also may be used to irrigate crops. Additionally, If an agricultural impact fee is adopted by the County (relating to conversion of lands in agricultural production to non-farm uses) which is applicable to this project, off-site agricultural lands dedicated pursuant to the HMP shall be considered when assessing the fee and shall be credited towards satisfy satisfaction of any obligation of the project to pay such fee or otherwise comply with the relevant County ordinance.

~~On-site preservation and/or enhancement of wetlands and the area's two waterways, i.e., Mountain House Creek and Old River, also shall provide potential habitat for raptors and the Tri-colored blackbird, as well as potential habitat for the Western pond turtle and the two special-status plant species potentially occurring on the site (Mason's lilaeopsis, which was found along Old River, and California hibiscus, which has not been found on the site during surveys performed to date).~~

The following policies and implementation measures are proposed to provide guidelines for an combined off-site mitigation program.

Assumptions:

- a) Most wildlife impact mitigations required for Mountain House can be satisfied by an combined HMP on lands adjacent or within reasonable proximity to the community that will continue to be used for agricultural production. ~~utilizing~~

Reclaimed wastewater as its primary irrigation water use also may be used to irrigate crops.

- b) The HMP requires sufficient acreage to mitigate impacts to approximately 3,860 acres of Swainson's hawk foraging habitat found within the Master Plan area in accordance with mitigation ratios established in the HMP. See Figure 7-8: Swainson's Hawk Foraging Habitat. ~~Additionally, if wastewater storage ponds are constructed on Fabian Tract, one of the alternative sites identified for such storage, Fabian Tract, mitigation will be required for approximately 300 additional acres of foraging habitat on the Fabian Tract.~~ Specific acreage requirements do not apply to the other HMP species.
- c) If reclaimed wastewater is used to irrigate HMP lands, the assumed agricultural water use for one year is will be approximately four AF per acre.
- ~~d) Actual use of the irrigation water by grain crops is expected to approach 3.5 AF per acre after losses.~~
- d) All habitat lands will be shared with farm operations without restricting the farmers' ability to continue to farm in a viable and economical manner.

Objective: To combine mitigation for impacts to wildlife (primarily the Swainson's hawk) with the preservation of agricultural land and irrigation by wastewater generated by Mountain House with the establishment of wildlife habitat, while maintaining viable and economical agricultural productivity and enhanced wildlife values on the mitigation site(s). If feasible, reclaimed wastewater may be used to irrigate crops on HMP lands.

Policies:

- a) Habitat mitigation for Swainson's hawks, Northern harriers, and Black-shouldered kites shall be provided through an combined HMP on off-site agricultural lands.
- b) The HMP may be combined with wastewater reclamation.

Implementation:

General Considerations

The HMP is attached as Appendix 7-B: Habitat Management Plan and includes the following elements:

- a) Standards. Performance and monitoring standards to ensure successful implementation of the plan, as well as long-term management procedures.
- b) Provision of Mitigation Land. Mitigation land provided through fee title and/or a permanent conservation easement.
- c) Identification of Responsible Agencies. Identification of the responsible agencies for land ownership, operation and maintenance of the HMP after the implementation phase.
- d) Phasing. Development of the HMP occurring in phases corresponding with the phases of community development.

- e) HMP/Farm Practices. All HMP components and farm practices shall be carried out without significant detriment to either the HMP or to the economical and practical operation of the farm lands.

Agricultural Management

- f) Viable Farm Operations. Selection of crop types as specified in the HMP to provide suitable wildlife foraging habitat and maintenance of agricultural practices which will ensure viable farming operations.
- g) Rodent Control. Use of non-chemical practices to control vole and gopher populations, and standard agricultural rodent control measures to control mice and squirrel populations.

Preservation of Wildlife Values

- h) Habitat for Special-Status Species. To the extent practicable, the provision of suitable habitat for other special-status species as discussed herein.
- i) Wildlife Habitat Preservation. Reasonable assurances that the wildlife habitat will be preserved in perpetuity.
- j) Tree Preservation. Whenever possible, existing mature trees on the mitigation site(s) shall be preserved because of their value as roosting and nesting sites for raptors and other wildlife.
- k) Mitigation Requirements. Mitigation provisions for the loss of Swainson's hawk foraging habitat within the Master Plan area in accordance with Section 7.3.3: Swainson's Hawk, below.

The mitigation measures and policies proposed within the Master Plan represent the County's current understanding of its legal rights and obligations under existing law, and are proposed with the recognition that both the biological and legal status of the Swainson's Hawk are subject to sudden and unpredictable change during the planning and implementation of the project. For example, during the preparation of the Habitat Management Plan (HMP) as well as the Master Plan and Specific Plan I, an additional Swainson's Hawk sighting occurred south of Byron Road, necessitating changes in the HMP, the Master Plan and Specific Plan I. It is also possible that during implementation of the project, the Swainson's Hawk could be removed from the California Endangered Species List.

From a legal standpoint, the extent of state and federal agencies' authority to require mitigation for loss of endangered species habitat has been the subject of several recent judicial decisions, as well as a recent opinion by the Legislative Counsel of the State of California. These decisions have raised serious questions as to the authority of the Department of Fish and Game and USFWS to require mitigation for habitat loss under the State and Federal Endangered Species Acts. Further clarification of these legal issues could arise in the context of caselaw, quasi-judicial opinions, new legislation or amendments of existing legislation.

For these reasons the policies of the Master Plan and Specific Plan I, and the mitigation measures in the several project Environmental Impact Reports to date, are subject to revision by the Board of Supervisors where changed biological or legal circumstances exist. (Under all circumstances, the measures in Section 7.3.2

pertaining to the protection an removal of nest trees shall still be required.) In no event, however, shall these changed circumstances eliminate the project applicant's obligation to comply with all requirements of the State and Federal endangered species acts.

Furthermore, in the event a country-wide or regional Swainson's Hawk mitigation program is implemented, the project applicant will retain the option to participate in such a program in lieu of the mitigation measures set forth in this Master Plan and the HMP. Finally, if the project applicant negotiates an agreement which is mutually acceptable to the applicant and the DFG, such an agreement will supersede the provisions of this Master Plan and the HMP.

Use of Reclaimed Wastewater

- 1) Use of Reclaimed Wastewater. A program for the use of reclaimed wastewater on HMP lands as discussed in Chapter Fourteen: Wastewater Reuse.

7.3.3 Swainson's Hawk

Swainson's hawk is a large, broad-winged buteo which frequents open grasslands. The hawk generally requires large trees (approximately 41' to 82' tall) for nesting adjacent to open grasslands, riparian areas, or agricultural land which supports accessible prey for foraging. Open fields and pastures are the primary forage areas.

In 1983, the State of California listed the Swainson's hawk as a threatened species, affording it protection under the California Endangered Species Act. The California Department of Fish and Game (DFG) draft hawk mitigation guidelines (1993) seek contain the following objectives:

- a) Preservation and recruitment of suitable nesting trees.
- b) Protection of existing nesting habitat from destruction or disturbance.
- c) Maintenance of compatible agricultural practices to preserve forage habitat.
- d) Mitigation for loss of breeding and/or foraging habitat.

No nesting by the Swainson's hawk was observed on-site during surveys performed in connection with the EIR for the Mountain House General Plan Amendment (March 1992), and no potential nesting habitat was found on the project site. Almost all Swainson's hawk sightings within the Master Plan area were made near or adjacent to Old River and secondarily over the lands north of Byron Road. ~~Very Few sightings have occurred~~ were recorded south of Byron Road.

More recent spring/summer 1994 surveys by DFG and Zentner and Zentner have documented two active Swainson's hawk nests within the Master Plan area, in contrast to the prior surveys. Neither of these nests occurs in preferred tree species. One Swainson's hawk nest is located in a willow tree overhanging Old River, and the other occurs in a lone eucalyptus tree surrounded by alfalfa fields ~~recently converted to alfalfa~~ in the ~~southern one third~~ central area of the site (see Figure 7.8: Swainson's Hawk Sightings).

The Final SEIR for the General Plan Amendment (January 1993) states that depending on various factors, replacement habitat requirements for Swainson's hawk impacts could be

as much as 4,290 acres (based on areas supporting suitable crops for Swainson's hawk foraging). Because of the recently documented nesting activity on the site, the Swainson's hawk impact area encompasses all areas supporting suitable forage crops. Approximately 430 acres of the 4,290 total consist of farmsteads, dairies and other facilities not compatible with Swainson's hawk use. Accordingly, the total area susceptible to use by the Swainson's hawk within the Master Plan area is 3,860 acres.

Assumptions:

- a) Suitable foraging habitat for the Swainson's hawk within the Master Plan area totals approximately 3,860 acres, upon which the basis of off-site mitigation is based.
- b) Habitat requirements of the Swainson's hawk will allow mitigation lands to provide habitat for other impacted species, ~~can accommodate the use of reclaimed wastewater for agricultural irrigation, and further, will satisfy any future obligation of the project to comply with a County agricultural impact fee, if one is adopted which is applicable to this project.~~ These mitigation lands also would qualify for inclusion in any agricultural preservation program which may be adopted for this project.
- c) Mitigation lands may use reclaimed wastewater for agricultural irrigation.

Objective: To insure the implementation of appropriate mitigation for Swainson's hawk impacts, including use of mitigation lands for other impacted species, agricultural production, and if feasible, utilization of reclaimed wastewater to irrigate crops, ~~and other compatible purposes.~~

Policies:

- a) Mitigation for loss of Swainson's hawk foraging habitat shall be ~~required for~~ based on approximately 3,860 acres of impacted land within the Master Plan area. ~~However, if wastewater storage ponds are constructed on Fabian Tract, one of the alternative sites identified for such storage, mitigation shall be required for the additional acres of lost foraging habitat at the mitigation ratios set forth in the HMP.~~
- b) Mitigation for Swainson's hawk impacts shall be combined with mitigation for other species to the extent practicable.
- c) Foraging habitat provided as mitigation for Swainson's hawk impacts must be at least 100 acres in size and, subject to reasonable land availability, contiguous. Nesting habitat provided as mitigation must be at least 5 acres in size and shall constitute no more than 6% of total mitigation lands.

Implementation:

- a) Mitigation Requirements. Mitigation for loss of Swainson's hawk foraging habitat may be satisfied by participation in the Mountain House HMP; fee participation in a County-sponsored multi-species conservation program or similar effort; by other programs as approved by San Joaquin County; payment to DFG of a mitigation fee under applicable DFG regulations and/or guidelines which may be in effect at the time mitigation is undertaken; or by a combination of all or any of the above elements.

The mitigation measures and policies proposed within the Master Plan represent the County's current understanding of its legal rights and obligations under existing law, and are proposed with the recognition that both the biological and legal status of the Swainson's Hawk are subject to sudden and unpredictable change during the planning and implementation of the project. For example, during the preparation of the Habitat Management Plan (HMP) as well as the Master Plan and Specific Plan I, an additional Swainson's Hawk sighting occurred south of Byron Road, necessitating changes in the HMP, the Master Plan and Specific Plan I. It is also possible that during implementation of the project, the Swainson's Hawk could be removed from the California Endangered Species List.

From a legal standpoint, the extent of state and federal agencies' authority to require mitigation for loss of endangered species habitat has been the subject of several recent judicial decisions, as well as a recent opinion by the Legislative Counsel of the State of California. These decisions have raised serious questions as to the authority of the Department of Fish and Game and USFWS to require mitigation for habitat loss under the State and Federal Endangered Species Acts. Further clarification of these legal issues could arise in the context of caselaw, quasi-judicial opinions, new legislation or amendments of existing legislation.

For these reasons the policies of the Master Plan and Specific Plan I, and the mitigation measures in the several project Environmental Impact Reports to date, are subject to revision by the Board of Supervisors where changed biological or legal circumstances exist. (Under all circumstances, the measures in Section 7.3.2 pertaining to the protection and removal of nest trees shall still be required.) In no event, however, shall these changed circumstances eliminate the project applicant's obligation to comply with all requirements of the State and Federal endangered species acts.

Furthermore, in the event a country-wide or regional Swainson's Hawk mitigation program is implemented, the project applicant will retain the option to participate in such a program in lieu of the mitigation measures set forth in this Master Plan and the HMP. Finally, if the project applicant negotiates an agreement which is mutually acceptable to the applicant and the DFG, such an agreement will supersede the provisions of this Master Plan and the HMP.

- b) Hawk Mitigation Program. Table 7.3: Proposed Swainson's Hawk Mitigation Program, below, summarizes the mitigation program proposed in the HMP. This program provides a range of mitigation ratios that reflect various factors as described in the HMP adapted from the current DFG Draft Mitigation Guidelines for Swainson's Hawks in the Central Valley of California (October 17, 1993). The table is arranged according to the habitat type to be acquired. Consequently, for any developer of a portion of the hawk impact area on the project site, this table provides a "menu" of possible selections, subject to specific restrictions. For foraging habitat acquisition, these mitigation ratios are based upon the distance of the acquired foraging habitat from an active nesting tree. The DFG Guidelines (1992 and 1993) do not address this subject; the 1993 DFG Guidelines propose varying levels of mitigation based upon the distance of the impact area from an active nest site.



Table 7.3 (1)
Proposed Swainson's Hawk Mitigation Program

Type of Habitat Dedicated (2)	Distance of Mitigation Land from Active Nest	Nest Trees Planted	Habitat Enhanced	*Mitigation Ratio (3)
Foraging	>5 miles and within 10 miles	N/A	Yes	0.50:1
Foraging	0 to 5 miles	N/A	Yes	0.33:1
Potential Nesting	N/A	Yes	Yes	0.25:1
Existing Nesting	N/A	No (4)	Yes	0.17:1

9/8/94

***Mitigation Ratio represents the ratio of acquired habitat to impacted area.**

1. This program assumes a 3,860-acre impact area on the project site. Mitigation also may be required for approximately 300 additional acres of foraging habitat on the Fabian Tract if this land is used for wastewater storage.
2. See Appendix Attachment B of the HMP for habitat descriptions and other definitions. Mitigation lands may be dedicated in fee or through appropriate conservation easements. Foraging habitat must be at least 100 acres in size and, subject to reasonable land availability, contiguous. Nesting habitat (existing and potential) must be at least 5 acres in size and shall constitute no more than 6% of total mitigation lands.
3. The mitigation ratios represent the amount of land, by habitat type, to be acquired to mitigate for each acre of impact.
4. Existing nesting habitat already contains nest trees and would not be planted with additional nest trees.

- c) Timing of Mitigation. Mitigation for loss of Swainson's hawk foraging habitat shall occur as foraging habitat ~~(including foraging habitat on Fabian Tract, if applicable)~~ is converted from suitable forage crops to urban uses as designated by this Master Plan and the applicable Specific Plan. Mitigation land shall be set aside in fee or by easement prior to project applicant receipt of the first construction permit for each approved Tentative Map. The actual mitigation acreage shall be determined at approval of each Specific Plan, or approval of a site development plan which is not encompassed within a particular Specific Plan.
- d) Protection and Removal of Nest Trees. Protection and removal of nest sites within the Master Plan area are subject to the following measures:
- (1) Eucalyptus Tree Nest Site. It is anticipated that project development will result in the removal of the one nesting tree (discovered in spring 1994) located south of Byron Road. Upon acceptance of the HMP by the County,

this eucalyptus tree may be removed at any time so long as Swainson's hawk do not occupy the tree and fledglings are not dependent upon the nest habitat (which shall be confirmed in writing by a qualified biologist). If this eucalyptus tree is not removed, it shall be subject to the measures described below.

- (2) Protection of Nest Trees (Other than Along Old River). If the Swainson's hawk is nesting in any tree within the Master Plan area, other than trees along the Old River, no disturbance, construction, or other project-related activities which may cause nest abandonment or forced fledging shall occur within 1/2 mile of such tree between March 11 and August 15, or until fledglings are no longer dependent upon nest habitat. The nesting and fledgling dependency determinations shall be made in writing by a qualified biologist.
- (3) Protection of Nest Trees Along Old River. If the Swainson's hawk is nesting in the willow tree along Old River (discovered in spring 1994), or in any other tree along Old River, no grading or other project-related activities requiring the use of heavy equipment shall occur within 1/4 mile of such tree between March 1 and August 15, or until fledglings are no longer dependent upon nest habitat. Other activities that do not require heavy equipment, e.g., planting in connection with restoration of the Old River and development of the Old River Park, may occur during this period. The nesting and fledgling dependency determinations shall be made in writing by a qualified biologist.
- (4) Removal of Nest Trees. If any Swainson's hawk nest tree (other than the eucalyptus tree referenced above) is to be removed and fledglings are present, the nest tree may not be removed until ~~September 15~~ or until the young are no longer dependent upon the nest site, a determination to be made in writing by a qualified biologist.
- e) Agricultural Impact Fee. If the County adopts an agricultural impact fee which is applicable to this project, agricultural lands dedicated pursuant to the HMP shall satisfy any obligation of the project to pay such fee or otherwise comply with the relevant County ordinance.

7.3.4 San Joaquin Kit Fox

The San Joaquin kit fox (kit fox) is a federally listed endangered and state listed threatened species, protected respectively under the Federal and California Endangered Species Acts.

A portion of the southern half of the Master Plan area is located within the northernmost segment of the kit fox range as currently designated by the US Fish and Wildlife Service.

One survey conducted between May and July 1991 using California Department of Fish and Game (DFG) approved methodologies (den searches, track/scent stations and spotlight surveys) failed to find any kit fox dens or other direct evidence of kit fox use on the project site. A second survey performed during April through September 1992 using more intensive survey methodologies (den and sign surveys, night spotlighting, scent stations and camera stations) confirmed the results of the earlier survey.

There have been no confirmed kit fox sightings on this site.

Appendix 7-D: San Joaquin Kit Fox Report (Zentner) assesses the potential occurrence of the kit fox on the Mountain House site, including comparison of the known range and habitat requirements of the fox with the site characteristics, and review of recent fox studies in the region. Appendix 7-E: Mountain House San Joaquin Kit Fox Review (Harvey) provides a peer review of materials regarding kit fox surveys on the site and a summary of additional field reconnaissance (note that this peer review was done by a consulting firm hired by the Master Developer and was not requested by the County). Appendix 7-C: Kit Fox Pre-Construction and Construction Protocols recommends provisions to ensure compliance with the Federal and State Endangered Species Acts.

Assumptions:

- a) Only a portion of the southern half of the Master Plan area is located within the current US Fish and Wildlife Service (FWS) designated kit fox range.
- b) Based on kit fox surveys, the Master Plan area does not provide suitable denning and foraging habitat for the kit fox. There have been no confirmed kit fox sightings, or dens found, on this site and development of the community will not result in a harm or taking of the species as defined by the Federal and State Endangered Species Acts.

Objective: To comply with the federal and state Endangered Species Acts.

Policies:

- a) If, in the future, it is determined at any time that the kit fox would be endangered by the development of the community, then appropriate mitigation shall be provided.

Implementation:

- a) Kit Fox Protection. The measures contained in Appendix 7-C: Kit Fox Pre-Construction and Construction Protocols shall be followed to the extent possible to ensure that project construction does not result in harm or injury to the kit fox. These measures shall apply for so long as the kit fox retains its listed status under the respective Endangered Species Acts, or successor legislation; or until such time as 50% or more of the community south of Byron Road is built.

7.3.5 Other Special-Status Species

The size and duration of the anticipated buildout of the Master Plan area prevents reliable quantification at this stage of the planning process of specific impacts and mitigation for localized species. Appendix 7-B: Mountain House Species Status (As of October 1993), Preferred Habitats and Survey Periods contains a list of these special-status species, their preferred habitats and optimal survey period for each species.

During the biological surveys conducted as part of the Mountain House General Plan Amendment, which were performed during the survey periods shown on Appendix 7-B, northern harriers, black-shoulder kites and burrowing owls were observed on-site. The former two species were concentrated near Old River. A pair of owls was found in the southern portion of the site. Small flocks of Tri-colored blackbirds were seen in April 1991 in the northern portion of the site. The western pond turtle was found on the banks of the Old River. Seine sampling along the Old River in April 1991 did not produce

either the Delta smelt or the Sacramento splittail; however, Old River was identified as potential habitat for each of these species.

Mason's lilaeopsis was observed on the pilings and banks along Old River in the northwest corner of the site. Old River and Mountain House Creek provide suitable habitat for the California hibiscus (although this species has not been found during surveys performed to date), which grows readily along river banks and sloughs at the edges between riparian and freshwater marsh habitats.

On-site preservation and/or enhancement of wetlands and the area's two waterways, i.e., Mountain House Creek and Old River, will provide potential habitat for raptors and the Tri-colored blackbird, Western pond turtle, Mason's lilaeopsis and California hibiscus.

Objective: To preserve and/or provide for other special-status species found within the Master Plan area.

Policies:

- a) The preservation and/or enhancement of habitat for other special-status species shall be considered in the development of Mountain House. These species may include Northern harrier, Black-shouldered kite, Burrowing owl, Tri-colored blackbird, Western pond turtle, Winter-run Chinook salmon, Delta smelt, Sacramento splittail, Mason's lilaeopsis and California hibiscus.

Implementation:

- a) Site Surveys. Each Specific Plan area (except Specific Plan I) shall be surveyed by a qualified biologist prior to approval of the Specific Plan to generally map the location of special-status species identified in the particular Specific Plan area. Development sites shall then be surveyed for special-status species potentially occurring on that site prior to approval of the first Development Permit the submittal of any tentative map for the applicable area. Such Surveys conducted prior to the submittal of tentative maps shall comply with any applicable survey protocols for such species promulgated by FWS or DFG.
- b) Raptor Surveys. Prior to submittal of any Development Permit for parcels with large trees (greater than 30 feet in height) or adjacent to Mountain House Creek or Old River, pre-construction surveys for occupied raptor nests shall be conducted by a qualified biologist. If occupied raptor nests are found which will be impacted by such development, no disturbance or other project-related activities that may cause nest abandonment or forced fledging shall occur within 200 feet of the occupied nest tree until fledglings are no longer dependent upon nest habitat, as determined by a qualified biologist.
- c) Burrowing Owl Surveys and Nest Relocation. Prior to submittal of any Development Permit for parcels with levees, berms, or other suitable ground-nesting locations, pre-construction surveys for burrowing owl nesting sites shall be conducted by a qualified biologist. Burrowing owl nesting sites impacted by development shall be relocated prior to construction. These nests shall be relocated to the Old River levee and/or other suitable sites that are not likely to be disturbed by future development. Active burrowing owl nests shall not be disturbed or relocated during the breeding season (typically April 15 to July 15) in

accordance with applicable DFG regulations and a permit must be obtained prior to any nest disturbance.

- d) Wetland or Riparian Habitat Restoration. Restoration of Mountain House Creek and other wetland or riparian habitats in the Master Plan area shall include, as may be appropriate to the restored habitat, preferred habitat for the special-status species identified above.
- e) Old River Levee. The existing Old River levee shall be preserved and/or enhanced to provide habitat for the western pond turtle, raptors, and other special-status species, as may be appropriate to this habitat.
- f) Participation in Other Programs. Compliance with the measures set forth above also may be accomplished through implementation of the HMP described in Section 7.3.1: Habitat Management Plan (HMP), or participation (by payment of a fee or otherwise) in an adopted County-wide multi-species habitat conservation plan. Regardless, pre-construction raptor and burrowing owl surveys would still be required to protect active nests until young birds have fledged even if a developer participates in HMP's or other conservation plans.

7.3.6 Wetlands Management

Wetlands are transitional ecosystems between open water and upland environments. There are approximately 25 acres of wetlands existing within the Mountain House area, including seasonal wetlands (see Section 1.4: Environmental Setting). Figure 7.9: 1993 Tree Locations and Wetlands indicates the location of wetlands.

Objective: To preserve wetlands within Mountain House

Policies:

- a) Development shall be carried out so that existing wetlands are preserved to the degree practicable.
- b) Where development cannot practicably occur without impacting wetlands, the development shall minimize impacts.
- c) Where impacts are unavoidable, their loss shall be compensated through mitigation.
- d) Wetlands shall be protected from damage caused by adjoining development. Buildings and structures shall be setback from the edge of wetlands a minimum of 50 feet. This setback distance should be increased where wetlands are of high value.
- e) Passive recreational uses such as bird watching, nature trails and observation areas are normally compatible with wetlands and may be permitted adjacent to wetlands. ~~shall be encouraged.~~ Active recreational uses such as ballfields, paved bike trails or other such uses shall not be located within or immediately adjacent to wetland areas.
- f) The Dry Creek wetland west of Kelso Road shall be preserved or enhanced as a natural amenity.

- g) Any riparian areas in the Dry Creek channel east of Kelso Road shall be relocated to the upstream area west of Kelso Road.

Implementation:

- a) Specific Plan Requirements. Provisions for the treatment of wetlands shall be included in any Specific Plan that will impact wetlands.
- b) Wetlands Mitigation. Wetlands mitigation shall provide for creation of wetlands to replace those which would be lost. Mitigation shall occur within the Master Plan area adjacent to, and contiguous with, preserved wetlands.
- c) Buffering. Where preserved wetlands provide valuable habitat to wildlife, protective fencing, screening or buffers shall be provided where necessary to minimize disruption of habitat areas. The type of protection will vary depending on the type and function of the wetland, the adjoining land use and the terrain.
- d) Wetlands Management Plan. As part of any Specific Plan that includes wetlands, a Wetlands Management Plan shall be adopted. The plan shall include setbacks for structures from wetlands.
- e) Runoff Water. Runoff water from developed or landscaped surfaces may be discharged into preserved wetlands, but shall be treated through application of appropriate Best Management Practices (BMPs) to ensure water quality, prior to entering the wetland areas. These practices will be monitored in accordance with state water quality control procedures.
- f) Fencing. All preserved wetlands and their buffers shall be temporarily fenced during construction so as to minimize the potential for inadvertent impacts from construction activities. Following construction, permanent barriers and/or fencing shall be installed to preclude access and damage from wheeled vehicles such as motorcycles and ORVs. Any fencing that is located within the drainage facilities of Mountain House Creek shall be designed to prevent debris accumulation or otherwise impact water surface elevations.
- g) Maintenance Requirements. The wetlands shall be retained as self-sustaining, requiring only minimal long-term maintenance to repair barriers or fences, and remove debris resulting from use of the area by residents.
- h) Recreational Uses. Active and passive recreational uses near wetlands shall be addressed in the Parks and Open Space Plan described in Section 7.2.2: Recreation System.
- i) Water Conveyance Pipeline. The raw water conveyance pipeline shall be constructed in accordance with the provisions of the Corps of Engineers Nationwide Permit for Utility line crossings (NWP 12). The ground contours shall be restored to their original condition following placement of the pipeline. In order to accelerate revegetation, the topsoil within wetlands shall be salvaged prior to trench excavation and replaced after backfilling the trench.
- j) Dry Creek Requirements. When development is proposed that is adjacent to or would impact any portion of the drainage course of Dry Creek, then a detailed plan for wetlands and riparian land management shall be prepared and implemented as part of the Specific Plan for the development. The Development Permit for the

water treatment plant will contain specific provisions to buffer and protect the Dry Creek wetland.

- k) Required Approvals. Any proposed modifications to wetlands or waters of the U.S. should be prepared in compliance with applicable laws and regulations of the Corps and the CDFG prior to approval of any Tentative Maps encompassing these features.

7.3.7 Tree Mapping and Conservation Policy

On December 10, 1992, a preliminary site survey was performed to determine the general location, species and condition of mature trees. Figure 7.9: Tree Locations and Wetlands is based on the preliminary tree survey which indicates that trees are generally confined to isolated portions of the Mountain House Creek corridor, windrows along existing roadways, agricultural fields or farmsteads, and the riparian edge of Old River.

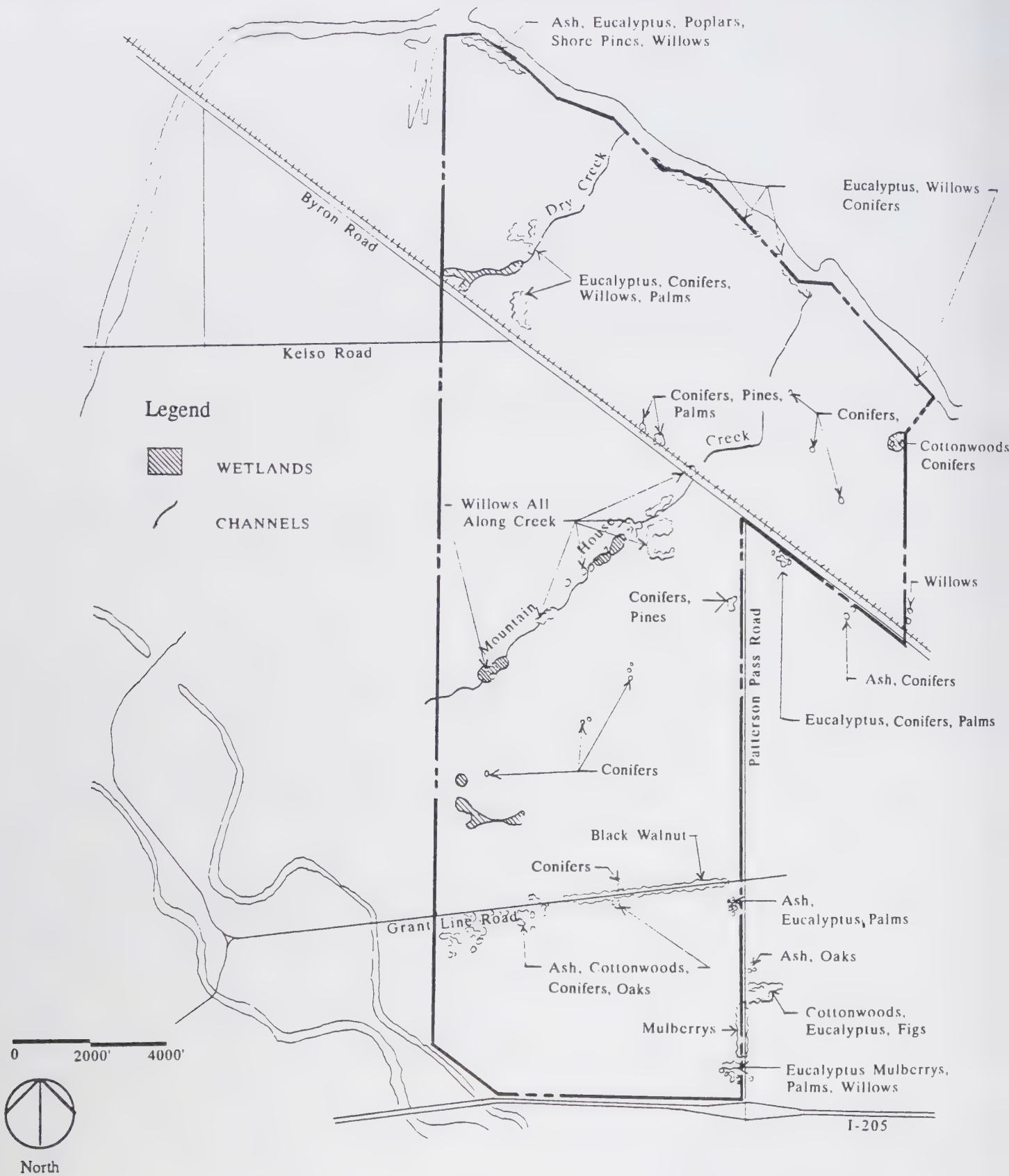
Objective: To preserve whenever possible the visual quality of healthy trees within and adjacent to the Mountain House community.

Policies:

- a) Existing healthy mature trees, particularly those located along Patterson Pass and Grant Line Roads, in good condition shall be preserved and incorporated into the landscape design of the community to the greatest extent practical. as much as possible. Land uses should be compatible with the preservation program for mature trees.

Implementation:

- a) Design of Roadways. The design of major roadways, widening or reconstruction of existing major roadways, and local streets shall address the preservation of mature trees in good condition.
- b) Horticultural Practices. Existing trees shall be preserved by following good horticultural practices to maintain existing drainage, ventilation, and solar conditions. These measures shall include keeping pavement well away from the driplines of trees designated for preservation.
- c) Tree Surveys and Assessments. Prior to submittal of any the first Development Permit, a detailed tree survey shall be performed for the subject area to accurately locate all mature trees, determine the species and assess the condition of mature trees. The information obtained from the survey shall be reviewed, and those trees found suitable for preservation shall be noted and considered in detailed designs.



4 CULTURAL RESOURCES

Objective: To preserve cultural resources within Mountain House.

Policies:

- a) Significant cultural resources and historic structures shall be identified and, where possible, preserved by integrating into new development or relocation.

Implementation:

- a) ~~Location of Significant Structures. With the exception of Specific Plan I, each Specific Plan shall locate and identify potentially significant prehistoric, architectural and/or historic structures. For Specific Plan I, such structures shall be located for the subject area prior to submittal of the first Development Permit.~~
- b) ~~Preservation Methods. When applicable, each Tentative Map submittal shall specify the method of preservation of significant historic structures.~~
- a) Additional Surveys. When specific land use and development plans are formulated as part of a Specific Plan, additional archaeological surveys shall be conducted in areas of development that have not been subjected to intensive archaeological reconnaissance. This shall include areas outside the Specific Plan area that are proposed for interim or permanent wastewater treatment or reuse.
- b) Buried Site (Ca-SJo-136). Because of the possibility that a buried site, Ca-SJo-136, may be located in the vicinity of Mountain House Creek, construction activity in the Mountain House Creek area near that site shall be monitored by an archaeologist.
- c) Village of Wicklund (Ca-SJo-229H). Because of the potential historic significance of Ca-SJo-229H, the site of the village of Wicklund, and because of the potential for buried features or artifact deposits in that area, an archaeologist shall monitor any construction work.
- d) Subsurface Features. If, during the course of construction, subsurface historic archaeological features were identified on sites Ca-SJo-230H and Ca-SJo-231H or anywhere within the project site, excavation shall cease and an archaeologist shall be contacted to evaluate these materials.
- e) Buried Prehistoric Resources. If, during the course of any construction activity, buried prehistoric cultural resources were found, excavation shall cease and an archaeologist shall be contacted immediately to evaluate these resources. Such evaluation may entail archaeological test excavation and/or mitigative data recovery.
- f) Demolition Permit. A demolition permit, to be approved by the Building Division of the Community Development Department, shall be required prior to destruction of any building in excess of 50 years of age.
- g) Discovery of Human Remains. The County Coroner, the Native American Heritage Commission, and an archaeologist shall be informed and consulted if a human prehistoric burial site were discovered during site construction. An agreement shall be formulated between the Native American representative, the archaeologist, San Joaquin County, and the developer with regard to the proper treatment and disposition of human remains and associated artifacts. Such treatment and disposition may require archaeological excavation and reburial.

7.5 PHASING AND COSTS

7.5.1 Capital Facility Cost and Phasing

More than 760 acres of the Mountain House community will be dedicated to parks, recreational uses, open space, and wetlands. The capital costs associated with development of these land uses will total more than \$57 million. Neighborhood parks will total \$6.8 million. Neighborhood park lands will be part of the land equity program and will be constructed by the CSD. Another \$16.3 million is associated with facilities that are considered "private ventures" because the facility will likely generate revenues to a private operator who will be responsible for constructing and operating the facility. Such private ventures are not addressed as part of the Parks and Open Space Plan.

In addition, there are approximately \$10 million of additional facilities that will be encouraged for development if it is determined that such development is financially feasible; these improvements are considered "optional community costs". Improvements listed as optional community costs are items that are considered desirable for the community, but will be directly dependent on the financial feasibility of their development. Some of these items include neighborhood pools, neighborhood community centers, and a community stadium and tennis court facility. If it is determined in future years that the community can afford to provide these amenities, and if the residents of Mountain House consider these items a priority, they will ultimately be provided by the community.

Of the "planned facilities", \$34 million will be included in the PFP for facilities that must be funded as backbone improvements. This amount includes \$3.8 million for kit fox habitat mitigation, although any kit fox mitigation requirements are considered highly unlikely. The costs associated with Swainson's hawk habitat mitigation are discussed in Chapter Fourteen: Wastewater Reuse, since reclaimed water irrigation land is proposed to be used jointly as foraging habitat for the hawk. Table 7.4 is a breakdown of planned facilities, private venture improvements, and optional community costs:

Table 7.4: Costs for Recreational Facilities

Planned Facilities	
Neighborhood Parks	\$ 6,845,000
Community Parks	17,241,000
Regional Parks	3,304,000
Linear Park	7,670,000
Public Art	1,400,000
Other Misc.	4,116,000
Total	\$40,576,000
Private Ventures	
Golf Courses	\$12,760,000
Marina	3,550,000
Total	\$16,310,000
Optional Community Costs	
Neighborhood Pools	\$ 3,129,000
Community Stadium Park	3,128,000
Neighborhood Community Centers	3,600,000
Total	\$ 9,857,000

Parks will be a central feature in each residential neighborhood and in the community as a whole. Therefore, neighborhood park development will occur on a continual basis as growth takes place to keep up with, or precede, the demand from residents.

~~Development of the first neighborhood park is expected in the first year of residential occupancy; p~~ Providing the parks at such an early stage of the community's development will demonstrate to a potential homebuyer that these amenities are considered a community priority. ~~The subsequent~~ All neighborhood parks are scheduled for development to commence half-way through the residential development of each neighborhood.

First-phase development of sport fields for team play is expected when approximately 800 units have been built. In addition to fields within neighborhood parks, the initial sports fields will be constructed on land reserved for the first high school and will later be transferred to the high school School District for their use. The park will be designed to serve existing and future residents and to act as an additional attractor for potential homebuyers.

Construction of the first community park is expected to occur prior to the 2,000th residential unit. Special purpose community parks, such as the Mountain House Creek Community Park and the Town Center Green, will be constructed as the adjoining lands develop.

~~The Old River Regional Park will be constructed as part of the development of the Specific Plan(s) for the lands adjacent to Old River. Timing, phasing and responsibilities~~

for regional park improvements shall be addressed by the Parks and Open Space Plan. Construction may occur in phases. The park will likely be funded from impact fees levied throughout Mountain House, as will public art, which will be provided as funding becomes available. It is assumed that development of the regional park will begin approximately mid way through residential buildout.

The golf courses and marina will be built when it is determined that there is a sufficient population base and demand to support the facilities.

Cost estimates for planned facilities and optional community costs assume dedication of sites for each facility. Purchase of land may be required for items considered private ventures. A detailed cost and phasing breakdown for planned facilities is included in the PFP.

7.5.2 Operations and Maintenance

Maintenance of parks and recreational facilities will be provided by the community operating out of community on-site facilities. Personnel and equipment will be combined for the maintenance of parks and other public facilities to create the most efficient and cost effective program possible. Ultimately it is anticipated that several staff persons will be needed strictly for the upkeep of park and open space areas in the community. The same personnel may be used to maintain the off-site mitigation areas.

7.6 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Park Plans in Specific Plan I. Specific Plan I shall provide conceptual park plans for parks within the Specific Plan Area. Preliminary Parks Plans for Specific Plan I shall be provided as part of the Parks and Open Space Plan.
- b) Park Plan in Other Specific Plans. Other Specific Plans shall provide Preliminary Park Plans for parks within the applicable Specific Plan Areas or as otherwise specified in the Parks and Open Space Plan.
- c) Recreation Facilities. Public parks, open space areas and recreational facilities shall be addressed by the Specific Plans in which they are located. With the exception of Specific Plan I, Specific Plans shall include a Preliminary Park Plan for each park site within the Specific Plan Area. For parks within the Specific Plan I, Preliminary Park Plans shall be provided as part of the Parks and Open Space Plan.
- d) Old River Plan. ~~Specific Plan(s) for areas adjacent to Old River shall provide~~ Preliminary Plans for the portions of the Old River Regional Park within the Specific Plan Area shall be provided in the Parks and Open Space Plan.
- e) Trail Connections. Provisions for trail connections shall be included in the Parks and Open Space Plan. Specific Plans for the affected area shall incorporate provisions of the Parks and Open Space Plan and provide for the design and location of regional trails and provide for linkages to destinations within the community, especially Mountain House Creek Community Park and Old River Regional Park. These trails include those planned by the East Bay Regional Park District, the Livermore Area Recreation and Park District, and the National Park Service (De Anza Trail).

- f) Golf Course Requirements. Golf course design criteria shall be provided by the Specific Plans for the golf course areas.
- g) Marina Design Criteria. Marina design criteria shall be provided by the Specific Plan for the marina area.
- h) Swainson's Hawk Habitat Mitigation. Mitigation for loss of Swainson's hawk foraging habitat shall occur as foraging habitat in accordance with this Master Plan and the Specific Plan pertaining to such lands. The actual mitigation acreage will be determined at approval of each Specific Plan, or approval of a site development plan which is not encompassed within a particular Specific Plan.
- i) Wetlands Requirements. Provisions for the treatment of wetlands shall be included in any Specific Plan that will impact wetlands.
- j) Dry Creek Requirements. When development is proposed that is adjacent to or would impact any portion of the drainage course of Dry Creek, then a detailed plan for wetlands and riparian land management shall be prepared and implemented as part of the Specific Plan for the development. The Development Permit for the water treatment plant will contain specific provisions to buffer and protect the Dry Creek wetland.

Public Works Infrastructure

CHAPTER EIGHT



ENERGY AND TELECOMMUNICATIONS

HAPTER EIGHT: ENERGY AND TELECOMMUNICATIONS

8.1	INTRODUCTION	1
8.2	ELECTRICITY	1
8.3	NATURAL GAS	5
8.4	ENERGY EFFICIENCY	8
8.5	TELECOMMUNICATIONS SYSTEMS	10
8.5.1	Overall Telecommunications System	10
8.5.2	Residential Communications	11
8.5.3	Business Communications	11
8.5.4	Community Services	12
8.6	SITING CRITERIA FOR PUBLIC FACILITIES	14
8.7	PHASING AND COSTS	14
8.7.1	Capital Facility Cost and Phasing	14
8.7.2	Operations and Maintenance	15
8.8	SPECIFIC PLAN REQUIREMENTS	15

List of Figures

Figure 8.1: Electrical Distribution Facilities Plan	2
Figure 8.2: Natural Gas Distribution Facilities Plan	7
Figure 8.3: Telecommunications Network Diagram	13

CHAPTER EIGHT: ENERGY AND TELECOMMUNICATIONS

1 INTRODUCTION

The following chapter addresses energy and communications requirements for the Mountain House community. Also included here are policies and implementation measures to facilitate energy efficiency and use of alternative energy sources, and to insure that the community is provided with high quality telecommunications services. Chapter Ten: Air Quality and Transportation Management, provides additional provisions for energy efficient transportation. Chapter Six: Public Health and Safety discusses safety requirements relating to fuel lines and pipelines.

Mountain House will be well-positioned to take advantage of the latest advances in energy and telecommunications technology. As a new community, Mountain House will not be saddled with obsolete and inefficient utility systems and infrastructure. New services can be provided quickly and at low cost by private enterprises and/or public utilities.

Some services, such as the in-community network, may be directly owned and administered by the community. Because the technology is advancing rapidly, it is not possible to predict the degree to which the community will directly participate. Therefore, the following provisions assume that other entities will provide most services. Regardless of service provider, these provisions are intended to allow the installation of current technology with resulting savings in energy, pollution, traffic and other impacts.

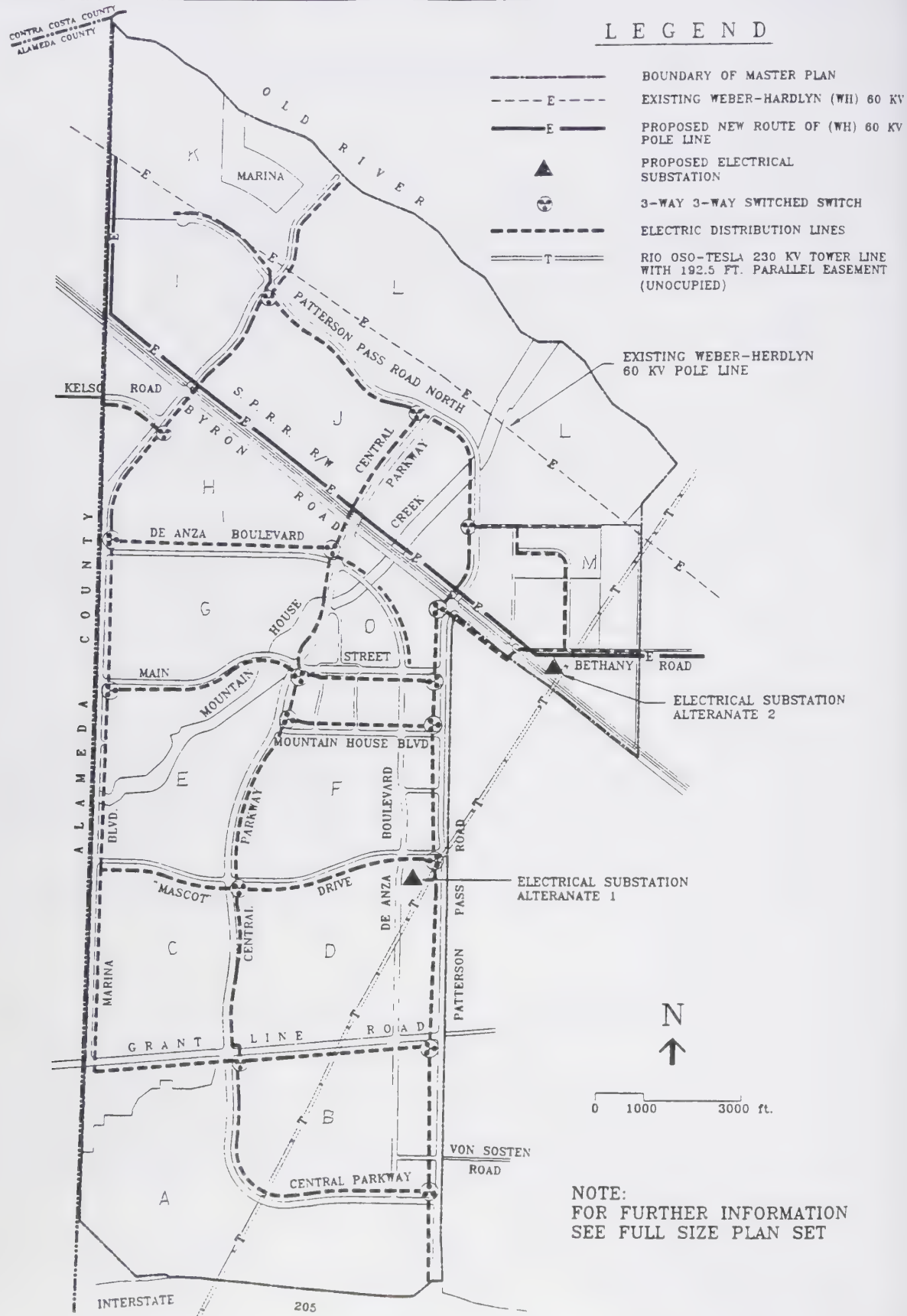
2 ELECTRICITY

Figure 8.1: Electrical Distribution Facilities Plan shows the proposed layout of the "backbone" electrical power distribution system for Mountain House. Existing and proposed transmission facilities consist of substations and those electrical lines generally operating above 34.5 kilovolts (kV). These backbone systems identify the routing of electrical lines to insure adequate planning in coordination with street construction. Siting of all major electrical facilities are subject to approval of the California Public Utility Commission.

Chapter Six: Public Health and Safety addresses public health issues associated with electric and magnetic fields.

Assumptions:

- a) A 20% margin of safety is provided in determining community power needs to provide protection against power interruptions.
- b) Existing local substation capacity will only be able to supply power to the approximately first 25% of the community's development. Beyond that, new distribution circuits will need to be supplied. A new five-acre 21-kV substation will eventually need to be built inside the Mountain House area. This will happen at the construction of about 4,100 homes and a corresponding amount of commercial/industrial development.
- c) The length of time required for the acquisition of property and rights-of-way, for the purchase and delivery of equipment and material, and for the design of the proposed substation facilities is currently five years.



- d) To accommodate future development, approximately three miles of PG&E's Westside Tap 60 kV electrical power transmission line (#268) will be relocated within the Byron Road right-of-way.
- e) A 230 kV power transmission line passes through the community on an easement that is restricted to certain uses. Safety considerations for this line are covered in Chapter Six: Public Health and Safety.

Objective: To provide an electrical power system that will deliver a reliable and cost-efficient source of power while minimizing risks to public health and risks of damage to utilities and properties adjacent to utility easements.

Policies:

- a) The community shall be planned to achieve a 25% energy saving by efficient community design.
- b) The community shall adhere to conditions and restrictions of use applicable to areas within the easement rights-of-way of primary power transmission lines. This includes setbacks along either side of the 60 kV and 230 kV lines.
- c) The electrical transmission and distribution system shall be designed and constructed in a manner that will assure a reliable and cost-effective source of electricity to the Mountain House community.
- d) Public health and safety issues shall be considered in developing and implementing the electric transmission and distribution systems.
- e) The Rio Oso-Tesla transmission line easements shall be designated for open space uses when they pass through residential areas. Where the transmission lines pass through industrial, commercial, and public land uses they shall reflect that land use designation, but uses under or adjacent to the easement shall be restricted to uses compatible with the easement, such as parking lots.

Implementation:

- a) PG&E Review. Each Specific Plan shall specify land uses and development standards within and adjacent to transmission lines. The County shall submit the Specific Plans to PG&E for review and comment on any proposed development in the vicinity of electric power utilities that cross the project site. As part of the development plan review and approval, PG&E shall be responsible for ensuring that the operation and condition of their electrical facilities are in compliance with PUC regulations for proposed land uses on and adjacent to their easement.
- b) Approved Land Uses within Easements. The project's proposed land uses within PG&E's electric power transmission line easements of 230 kV shall be subject to PG&E approval and in compliance with the following PG&E approved land uses:

Automobile Parking

~~Short term parking of movable passenger vehicles and light trucks, such as pickups and vans, is allowed. Heavy equipment access to facilities is to be maintained at all times. Parking shall clear PG&E structures by at least 10 feet. Protection of facilities from vehicular traffic shall be provided at the developer's expense and to PG&E specifications. Blocked up vehicles, carports, canopies or awnings are not allowed.~~

Buildings and Other Structures

No buildings, swimming pools, wells or similar structures shall be permitted within the easements or in any prescribed setbacks.

Grading

Cuts, trenches or excavations shall not be permitted within 25 feet of any tower footing. PG&E engineers shall review grade changes in the vicinity of towers. No fills shall be allowed which would impair the ground to conductor clearances. Towers shall not be left on mounds without adequate road access to the base of the structures.

Fences and Walls

Heavy equipment access to facilities shall be maintained at all times. Metal fences shall be grounded to PG&E specifications. No fences shall be installed within 10 feet of any tower footing or pole. Retaining or sound walls require PG&E review.

Landscaping

Landscaping is allowed. Trees and shrubs are limited to those varieties that do not exceed 15 feet in height at maturity. Reasonable access to facilities shall be maintained, including access by heavy equipment. Greenbelts are encouraged.

Storage of Flammable, Explosive or Corrosive Materials

No trash bins, trash enclosures, dumpsters or incinerators are allowed.

Streets and Roads

Streets and roads are allowed, provided access to facilities is maintained at all times and structures are provided with protection from traffic. Street lights may be allowed, but in all cases must be reviewed by PG&E for proper clearance.

Reservoirs

Reservoirs, sumps, drainage basins and ponds are allowed within overhead electric easements, provided reasonable access to facilities and proper clearances above the water surface are maintained.

Recreation Areas

Playgrounds, parks, tennis courts, basketball courts, pedestrian trails and barbecue pits are allowed, but require special PG&E review and approval.

Pipelines

Pipelines are allowed provided crossings are held to a minimum and are aligned as near to a right angle as possible. No pipelines are allowed (except sprinkler systems) within 25 feet of PG&E structure. Leach fields are not allowed.

Signs

Signs are not allowed except in rare cases and subject to individual review.

- c) Easement Setbacks. Structure and setbacks outside but adjacent to powerline easements shall comply with the provisions of this Master Plan (see Section 6.9: Electric and Magnetic Fields).
- d) Undergrounding of Lines. All electrical distribution lines shall be underground where practical. All transmission or electrical lines shall be underground where practical.

8.3 NATURAL GAS

Figure 8.2: Natural Gas Distribution Facilities Plan shows the proposed layout of the "backbone" natural gas distribution and transmission systems for Mountain House. The gas transportation system includes facilities such as regulator stations or pumping stations and pipelines generally operating above 100 psig, that transfer large loads of natural gas from point to point in the overall natural gas system. The distribution system includes pipelines, generally operating at 60 psig or less and individual gas regulators that take the natural gas directly into homes and businesses.

Existing infrastructure includes PG&E's line #2, a 26-inch diameter transmission line which crosses through the southern part of the Master Plan area from I-205 to Grant Line Road. Also running along Patterson Pass Road is the 6" / 8" diameter natural gas transmission line #176. This line turns and parallels Byron Road, to the northwest corner of the Master Plan area.

Assumptions:

- a) A 10% safety margin has been assumed in the calculation of the community's gas demand.
- b) A 25% natural gas savings is assumed in the calculation of the community's gas demand.

Objectives: To provide a natural gas transmission and distribution system that will deliver a reliable and cost-efficient source of natural gas to the community, while minimizing the risks to public health and the risk of damage to utilities and properties located adjacent to utility easements.

Policies:

- a) The natural gas transmission and distribution systems shall be designed and constructed to assure a reliable and cost-effective source of natural gas to the Mountain House community, and to achieve a 25% savings in the consumption of natural gas as compared to standard usage.
- b) Public safety issues shall be considered during construction near natural gas transmission and distribution systems.

Implementation:

- a) PG&E Review. Each Specific Plan shall specify land uses and development standards adjacent to natural gas lines. The County shall submit the Specific Plans to PG&E for review and comment on any proposed development in the vicinity of natural gas utilities that cross the project site.
- b) Approved Land Uses within Easements. The project's proposed land uses within natural gas transmission pipeline easements shall be subject to PG&E approval and in compliance with the following PG&E approved land uses.

Automobile Parking

~~Short term parking of movable passenger vehicles and light trucks, such as pickups and vans, is allowed. Heavy equipment access to facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of facilities from vehicular traffic is to be provided at the developer's expense and to PG&E specifications. Blocked up vehicles, carports, canopies or awnings are not allowed. Easily removed paving materials, such as asphalt concrete, are to be used over gas pipelines.~~

Buildings and Other Structures

No buildings, swimming pools, wells or similar structures shall be permitted within the easements.

Grading

PG&E engineers shall review grade changes in the vicinity of gas transmission lines. Deviations from 42-inch minimum and 60-inch maximum cover require special review and approval.

Fences and Walls

Patrol and maintenance requirements are such that gas transmission corridors must be maintained in an essentially open state. Heavy equipment access to PG&E facilities is to be maintained at all times.

Landscaping

Landscaping is allowed. Reasonable access to PG&E facilities must be maintained, including access by heavy equipment. No trees or deep-rooted shrubs are permitted within 10 feet of underground pipelines.

Streets and Roads

Streets and roads are allowed, providing access to facilities are maintained at all times and structures are provided with protection from traffic.

Recreation Areas

Playgrounds, parks, tennis courts, basketball courts, and pedestrian trails are allowed, but require special PG&E review and approval. Pedestrian trails are allowed.

Pipelines

Pipelines are allowed, provided crossing are held to a minimum and as nearly at a right angle as possible. Longitudinal pipelines require special review and approval. Sprinkler systems are allowed. Leach fields are not allowed. Separation/Distance between gas lines and proposed pipelines must be reviewed in every instance to meet electrolysis conditions.

Signs

Signs are not allowed except in rare cases and subject to individual review by PG&E. Signs are not allowed within 10 feet of underground lines.

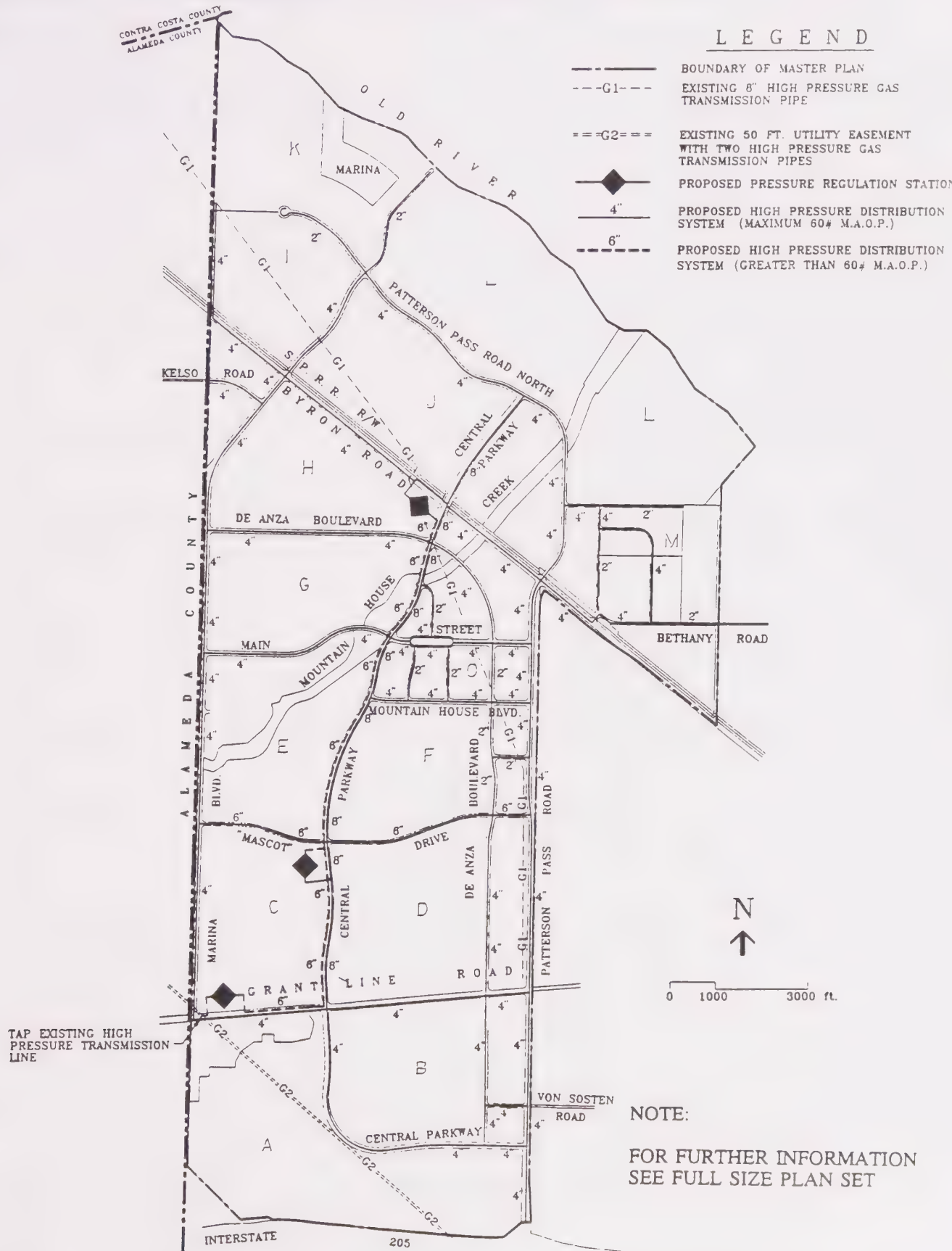
Reservoirs

Reservoirs, sumps, drainage basins and ponds are not permitted within gas transmission line easements.

Subdivision Design

Subdivisions affecting gas transmissions easements must be laid out to provide an open corridor along the easement to accommodate PG&E's need for frequent patrolling as well as construction and maintenance requirements. Setbacks of homes and other structures shall be in compliance with County codes.

- c) Pipeline Relocation. A detailed proposal to relocate the eight-inch natural gas pipeline located north of Byron Road shall be included in the first residential neighborhood Specific Plan north of Byron Road. A preliminary response from PG&E regarding the proposed relocation shall be secured and documented prior to approval of the Specific plan.



8.4 ENERGY EFFICIENCY

Mountain House is proposed to incorporate energy efficiency from the initial phases of development through the life of the community. This includes, but is not limited to, energy conservation for residential, commercial and industrial sectors. Sources of alternative energy are solar, wind, fuel cells, natural gas generators, and energy storage devices like batteries and compressed air.

Chapter Ten: Air Quality and Transportation Management, contains additional provisions relating to transportation-related energy use. Chapter Six: Public Health and Safety discusses programs for recycling and waste management.

Objective: To minimize the consumption of nonrenewable energy and encourage the development and use of alternative energy sources at Mountain House.

Policies:

- a) Energy usage shall be reduced by 25% of the traditional standards by using energy efficient design and programs.
- b) Energy efficient design shall be required as a component of all building projects. Home designers shall be encouraged to include solar water heating in their design. Commercial and industrial operations shall be encouraged to include active solar systems in the design of buildings, if cost effective.
- c) Site planning of residential and commercial areas shall incorporate measures to save energy. As much as practical, the design and layout of residential streets and the design of homes shall promote the use of solar orientation.
- d) The design of buildings and facilities within the community shall incorporate cost-effective measures to reduce the need for energy used for lighting, heating, cooling, ventilation and any other energy needs.
- e) Natural heating and cooling shall be incorporated into residential and commercial project design through such techniques as efficient building orientation, architectural features, shade trees and other landscaping, and appropriate measures
- f) Landscape plans shall be designed and reviewed to insure that, to the extent possible, vegetation is used effectively to reduce water demand and provide wind buffering and solar shading where desired. Vegetation shall not be placed in locations that would shade a solar collector on another person's property. Native landscaping and the efficient use of all water resources, including irrigation and waste water reuse, shall be used to the maximum extent feasible to help reduce overall energy use and peak period pumping requirements (see Appendix 4-A: Design Manual for landscape standards).
- g) Governmental buildings, municipal services, and transportation systems shall be planned, designed, and constructed to minimize energy consumption by utilizing available, cost-effective technologies and design techniques.
- h) Infrastructure systems (e.g., water supply, transportation, wastewater) shall be planned, design and constructed to include cost-effective energy efficient designs and technology.

Implementation:

- a) Community Energy Conservation Plan. A Community Energy Conservation Plan shall be prepared with the assistance and recommendations of the energy suppliers prior to the submittal of the first Development Permit.
- b) ~~Solar Rights Act. The community shall conform with the Solar Rights Act of 1987 and Solar Shade Control Act of 1987.~~
 - ~~Local planning and building ordinances, including design review criteria utilized by the Community Review Board (CRB) shall not unreasonably prohibit the use of solar energy systems.~~
 - ~~Tentative Maps shall be reviewed to provide, to the extent feasible, opportunities for future use of natural heating or cooling.~~
 - ~~An ordinance requiring easements for solar access as a condition of Subdivision Map approval may be adopted. Criteria requiring such easements may also be adopted as part of the design review process.~~
- b) Landscape Plans. All improvement plans shall contain landscape plans.

8.5 TELECOMMUNICATIONS SYSTEMS

This section contains the telecommunications plan for Mountain House, including discussions of voice, data, video, and special services as they relate to residential, business and community services. Figure 8.3: Telecommunications Network Diagram illustrate the plan for telecommunications.

The telecommunications industry is currently achieving major breakthroughs in such areas as interactive television, nearly unlimited line service, and other innovative telecommunications services. As a new community, Mountain House will be able to take advantage of such state-of-the-art technologies. While it is not possible to strictly mandate selected services, it is possible to set a policy framework to allow advanced telecommunications services to proceed quickly.

Some basic services such as telephone, low speed data and video are common to all users. However, there are variations and specific requirements depending on the type of users. This section identifies the following groups and discusses each separately:

- Residential Uses
- Business Uses
- Community Services

Residential users have a need for basic telephone service, low speed data service and CATV. Each dwelling will be equipped to provide these types of services. In addition, high speed data, expanded telephone (multi-line facilities) and video services may be required for larger residential building complexes and/or for individual dwellings.

It is assumed that the business community of Mountain House will consist of individual stores, shopping centers, office complexes and light industry. The telecommunications needs for businesses is for multiple telephone lines, low and high speed data and special video services.

8.5.1 Overall Telecommunications System

Objective: To provide Mountain House with extensive telecommunication services to satisfy current and anticipated future needs for the next several decades.

Policies:

- a) The telecommunications transport system shall consist of a high speed digital fiber optics network. The hub of the network shall be centrally located. It shall be the communication center and focal point for all forms of telecommunications within the community and to and from the community.
- b) The backbone transmission facilities shall be constructed underground to connect designated substation in the individual subdivisions to the communications center.
- c) The underground backbone conduits shall be installed to accommodate fiber optics and/or other cables required to satisfy the needs of a given service area.

Implementation:

- a) Uninterrupted Power Supply. Uninterrupted Power Supply shall be provided via battery back-up for the telephone service and any other declared "critical" component (fire, security, life-support).

- b) Communications Facilities. Communications facilities shall provide for splicing of fiber optic cables and other requirements, as needed. Preliminary locations, which are subject to change as designs are refined, are in neighborhood centers, at the Town Center, and at Mountain House Business Park.
- c) Undergrounding. The backbone telecommunications facilities shall be constructed underground and follow the main routes of the other service utilities.

8.5.2 Residential Communications

The standard telecommunications service for residences is telephone service. In addition, automatic meter reading and video entertainment via standard CATV, video on demand and interactive video will be provided.

Typical examples of telecommunications services for homes are telecommuting and homeshopping. With an advanced telecommunications transport system, residential users will be able to communicate with banks, stores, local governments, schools, libraries and brokers; pay bills, vote, register complaints, and read meters remotely; attend community meetings and school board meetings; check on children's homework assignments; attain computer based information; and make investments without the use of a motor vehicle.

With these and other possibilities, it is apparent that these telecommunications services will have a major impact on traffic reduction and improved air quality, including reduced road maintenance and reduced use of fuels.

Objective: To provide all forms of modern telecommunications to enable the users to conduct many job and business functions from the home.

Objective: To provide adequate spare communication lines for expansion of services within the community as needed for the next 20 to 40 years.

Policies:

- a) Provisions shall be made that allow residents to take advantage of advanced communications technologies.

Implementation:

- a) Residential Equipment. As a condition of Tentative Map approval, each residential unit building permit shall include the requirement that shall have an appropriate "in unit" hook-up terminal. ~~be included in each unit.~~

8.5.3 Business Communications

High speed facilities will be used to provide multi-line telephone service, low and high speed data and video conferencing for businesses within the community.

By providing for high-speed and broad-band transport, many business functions may be performed without the user having to commute to an office. For example, employees who utilize computer terminals may perform their work from home, and inquiries for information and business transactions may be performed by business and residential clients.

Objective: To provide high speed digital transport facilities for all forms of telecommunications that will serve businesses within the community.

Objective: To provide closed circuit TV for security, telemetering for alarms and remote power controls.

Policies:

- a) Businesses shall be able to take advantage of advanced communications technologies.

Implementation:

- a) Business Equipment. As a condition of Tentative Map approval, each business building permit shall include the requirement that shall have an appropriate "in unit" hook up terminals and equipment. be included in the building.

8.5.4 Community Services

Community services include police, fire, CSD administration, schools, emergency services, parks and recreation, and infrastructure services. All of these organizations require basic and special telephone service. In addition, there is a need for low and high speed data transmission facilities, and for video and telemetry (low speed data) transport between many control and surveillance points.

Objective: To provide telecommunications transport facilities to satisfy the needs of CSD administrative and general services, schools, libraries and recreation facilities.

Objective: To provide fast response to emergencies (police, fire and major medical).

Policies:

- a) Communications systems of the latest technology shall be provided for use by all of the following:
 - Police
 - Fire
 - Emergency medical services
 - Community administration
 - Schools
 - Parks and recreation
 - Public infrastructure including wastewater and water treatment plants



8.6 SITING CRITERIA FOR PUBLIC FACILITIES

The following section addresses siting criteria for public utilities. Siting criteria for other public facilities are found in the relevant chapters of this report. Setback conditions for schools near transmission corridors are discussed in Chapter Five: Education, Child Care and Library Services. Chapter Six: Public Health and Safety discusses safety requirements for electric and magnetic fields, fuel lines and pipelines.

Objective: To minimize adverse impacts of public utilities and facilities on the aesthetics of the new community.

Policies:

- a) Electrical and gas facilities shall be located and treated so as to have a minimum of visual and other impacts on the community, especially residential neighborhoods and other sensitive land uses.
- b) Utilities (electrical distribution, telephone, cablevision, natural gas, and other) underground or conceal public facilities, including surface access boxes or manholes, shall be located such that they will have a minimum impact on maintenance and vehicular pedestrian traffic.
- c) Future development plans shall closely coordinate the placement of surface mounted public facilities with the architectural design of the community to minimize the adverse impact on aesthetics.
- d) Public safety and convenience shall be considered in the design and placement of public utilities and facilities.
- e) Whenever possible, electrical substation facilities shall be located in commercial or industrial areas. Electrical substations sites shall be buffered around its perimeter by tall fences and landscaping. ~~All setbacks shall comply with County codes.~~
- f) Electrical transformers within residential neighborhoods shall be in underground vaults. Where located in commercial and industrial areas and in the downtown area, transformers may be mounted above-ground provided they are adequately shielded by landscaping. All setbacks shall comply with County codes.

8.7 PHASING AND COSTS

8.7.1 Capital Facility Cost and Phasing

The capital costs associated with utility and communication facilities that are not provided by private service vendors are included in the cost estimates for individual roadways, educational facilities, and public safety buildings. Installation costs associated with gas and electricity distribution are paid by the utility companies or agencies and recouped through charges to the end user. Installation of the telecommunications network will also be paid by the company providing the service and, ultimately, will be charged to end users through hook-up fees.

Electrical power distribution will be installed on an as-needed basis as part of the on-site roadways. The only exceptions to this incremental construction will be the extension of the initial temporary service lines for the first Specific Plan and the siting and construction of the permanent community electrical substation. The initial service line

extensions will require accelerated planning and construction to coincide with the start of residential development.

The detailed planning and design for the community electrical substation will begin immediately upon approval of the Master Plan. The planning and construction processes will take approximately five years, with completion in time for development of the second Specific Plan.

Natural gas will also be provided on an as-needed basis as part of the on-site roadways. However, the relocation of the existing gas line from Patterson Pass Road to Central Parkway will require detailed planning and phasing. The planning for this relocation will be included in a Natural Gas service program, the preparation of which will begin immediately after final approval of the Master Plan. It is anticipated that the relocation would take place in stages as development occurs.

Telecommunications will also be provided on an as-needed basis and will be developed along with on-site roadways.

8.7.2 Operations and Maintenance

Operations and maintenance of public utilities and communication facilities will be the responsibility of the service provider and will be paid by user charges levied on a monthly service bill. Therefore, these costs are not included in the fiscal analysis in the PFP.

8.8 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Electrical Transmission Lines. Each Specific Plan shall specify land uses and development standards within and adjacent to transmission lines. The County shall submit the Specific Plans to PG&E for review and comment on any proposed development in the vicinity of electric power utilities that cross the project site.
- b) Natural Gas Lines. Each Specific Plan shall specify land uses and development standards adjacent to natural gas lines. The County shall submit the Specific Plans to PG&E for review and comment on any proposed development in the vicinity of natural gas utilities that cross the project site.

CHAPTER NINE



TRANSPORTATION AND CIRCULATION

CHAPTER NINE: TRANSPORTATION AND CIRCULATION

9.1	INTRODUCTION	1
9.1.1	Background	1
9.1.2	Transportation Trigger Points	1
9.1.3	Fair Share	2
9.1.4	Relationship to Specific Plan	3
9.2	FREEWAY IMPROVEMENTS	3
9.3	COUNTY ARTERIALS	8
9.4	ARTERIAL INTERSECTIONS	13
9.5	ON-SITE ROADWAY CIRCULATION AND DESIGN	18
9.6	ROADWAY MAINTENANCE	48
9.7	VEHICULAR PARKING	48
9.8	BICYCLE AND PEDESTRIAN FACILITIES	51
9.8.1	Bicycle Facilities	51
9.8.2	Pedestrian Facilities	54
9.9	TRANSIT	57
9.9.1	Bus Transit	57
9.9.2	Rail Transit	60
9.9.3	Rail Crossings	62
9.10	PHASING AND COSTS	65
9.10.1	Capital Facility Cost and Phasing	65
9.10.2	Operations and Maintenance	70
9.11	SPECIFIC PLAN REQUIREMENTS	71

List of Figures

Figure 9.1: Freeway and Rail Improvements	7
Figure 9.2: Roadways with Allowed LOS D	11
Figure 9.3: Intersection Signalization and Channelization	17
Figure 9.4: Roadway Classification Diagram	22
Figure 9.5: Cross Section Index	23
Figure 9.6: Byron Road (Patterson Pass to Alameda County Line) - Major Arterial	24
Figure 9.7: Byron Road (Wicklund Road to Patterson Pass Road) - Major Arterial	25
Figure 9.8: Central Parkway - Minor Arterial	26
Figure 9.9: De Anza Boulevard - Minor Arterial	27
Figure 9.10: Grant Line Road (Between Patterson Pass Road and De Anza Blvd.) - Major Arterial	28

Figure 9.11: Grant Line Road (West of De Anza Blvd.) - Major Arterial	29
Figure 9.12: Kelso Road - Minor Arterial	30
Figure 9.13: Main Street (Patterson Pass Road to De Anza Blvd.) - Major Arterial	31
Figure 9.14: Main Street (De Anza Boulevard to Central Parkway)	32
Figure 9.15: Main Street (at Village Green) - Minor Arterial	33
Figure 9.16: Main Street (West of Central Parkway) - Minor Arterial	34
Figure 9.17: Marina Boulevard (Adjacent to County Line) - Minor Arterial	35
Figure 9.18: Marina Boulevard (From County Line to Patterson Pass Road North) - Minor Arterial	36
Figure 9.19: Mascot Boulevard - Minor Arterial	37
Figure 9.20: Mountain House Boulevard - Minor Arterial	38
Figure 9.21: Patterson Pass Road (Central Parkway to I-205) - Major Arterial	39
Figure 9.22: Patterson Pass Road (Central Parkway to Grant Line Road) - Major Arterial	40
Figure 9.23: Patterson Pass Road (Grant Line Road to Mascot Boulevard) - Major Arterial	41
Figure 9.24: Patterson Pass Road (Mascot Boulevard to Main Street) - Major Arterial	42
Figure 9.25: Patterson Pass Road (Main Street to Byron Road) - Major Arterial	43
Figure 9.26: Patterson Pass Road (North of Byron Road) - Minor Arterial	44
Figure 9.27: Collector, Commercial/Industrial/Public	45
Figure 9.28: Residential Collector Streets	46
Figure 9.29: Local Residential Streets, Types I, II & III	47
Figure 9.30: Bicycle and Pedestrian Network	55
Figure 9.31: Walk and Path Standards	56
Figure 9.32: Transit Routes and Facilities Plan	58
Figure 9.33: Railroad Crossing Concept	64

List of Tables

Table 9.1: Freeway and Rail Improvements	6
Table 9.2: County Arterial Road Improvements	12
Table 9.3: Signalization at County Arterial Intersections	14
Table 9.4: Signalization at Community Arterial Intersections	15
Table 9.5: Channelization at Intersections	16
Table 9.6: Mountain House Road Classifications and Standards	21
Table 9.7: Minimum and Maximum Parking Requirements for Mountain House	49
Table 9.8: Costs for Transportation Improvements	65
Table 9.9: Summary of Transportation Trigger Points	67

CHAPTER NINE: TRANSPORTATION AND CIRCULATION

9.1 INTRODUCTION

9.1.1 Background

This chapter presents provisions for transportation services and facilities, public transit, transportation demand management, and land use planning strategies that reduce reliance upon the single occupant auto for trips. This chapter also specifies implementation measures and phasing in relation to specific thresholds along with underlying assumptions.

~~Appendix 9-A: A background Report to this chapter,~~ Master Plan and Buildout ADT Volumes provides information on expected traffic volumes. Chapter Three: Land Use contains information related to the integration of land use and circulation. Chapter Ten: Air Quality and Transportation Management discusses provisions for transportation demand management. Section 9.10: Phasing and Costs summarizes costs and funding for transportation improvements, as described more fully in the Public Financing Plan.

9.1.2 Transportation Trigger Points

This Master Plan anticipates the need for and timing of circulation improvements required to serve the community through buildout. The following chapter lists “trigger points” or points in the buildout of the community when specific transportation improvements are required to be in place based on the number of occupied residential units. Not included in the trigger schedules of this Master Plan are the amounts of time that will be required for the plumbing, engineering and construction of improvements. Such trigger points use residential occupancy as the basis for requiring improvements. While trips are a more accurate basis for determining immediate need and benefit share, they are not easily used for ongoing community-wide planning and monitoring. Factors that make trips difficult to use include: peak hours vs. average daily trips (ADT), road segment capacities, segment trip variations (which segment is used as the trip trigger) and an increased responsibility to maintain frequent trip counting and traffic modeling.

While the trigger points listed in this chapter are based on a comprehensive evaluation of the County’s traffic model and the policies and criteria of this Master Plan, the actual dates of improvement need and the actual dates of construction may vary significantly. Therefore, the use of trigger points is intended to serve as a flexible planning tool that will accommodate unpredicted changes in the future. The major factors influencing trigger points are:

- Growth patterns and rates both within the community and in the region.
- Job growth patterns and rates both within the community and in the region.
- Success or failure of regional alternative (to the auto) transportation programs such as bus and rail.
- Political, economic and funding factors beyond the control of the community.
- The degree of participation by other communities and jurisdictions in the shared improvement programs.

Objective: To establish thresholds in the buildout of the community when specific transportation improvements are required.

Policies:

- a) Trigger points shall be used as guidelines for future transportation improvements, planning and fee structuring, and not as actual construction dates. Trigger points shall be tied to residential occupancy or other points of development as appropriate.
- b) The community shall maintain a 5-year roadway improvement plan to identify financing and phasing provisions for transportation improvements.

Implementation:

- a) Monitoring Program. Prior to the first Development Permit in Specific Plan I, the County shall review and, if appropriate, revise the trigger points listed in Table 9.1 and Table 9.2. These revisions shall use the latest version of the COG Travel Model, or other model acceptable to the County, and the most current projection of growth, and shall be funded by the Master Developer. Model updates and trigger reviews shall be prepared by the proponent of each subsequent Specific Plan.

A Transportation Monitoring Program shall be developed prior to submittal of the first Development Permit. The monitoring program, which shall be conducted annually, shall serve as a means of comparing the actual traffic generated by the project to the traffic counts, LOS conditions, and progress of planned transportation improvements and planning studies such as Project Study reports. Traffic monitoring shall include traffic counts and level of service analysis on all community gateways, and impacted County roads and freeway facilities. Adequacy of the trigger points and progress toward implementation of the required transportation improvements shall also be reviewed.

Should traffic impacts of the project be found during the annual monitoring to be significantly different from those projected, the County may take appropriate action to modify triggers, improvement requirements and fair share responsibilities. Any Master plan change shall follow a public hearing on the matter and shall be based on findings that the amendment is appropriate for the timely construction and adequate funding for the related transportation improvement.

- a) ~~Trip Analysis. Once a trigger point is reached for a given improvement, a trip analysis shall be required based on a run of an updated traffic model. An actual construction and financing plan shall then be developed and implemented.~~
- b) A Community Roadway Improvement Plan shall be prepared prior to submittal of the first Development Permit.

9.1.3 Fair Share

"Fair Share" means the community's obligation to participate in the planning, construction and/or funding for an infrastructure facility that will be shared with other jurisdictions, to the extent of the community's proportional benefit or impact.

9.1.4 Relationship to Specific Plan

This Master Plan provides a preliminary discussion of the overall circulation requirements of the project at buildout, including a description of major implementation measures and implementation phasing.

Each Specific Plan presents implementation measures of the Master Plan as they would relate to each Specific Plan, including measures to accomplish the following:

- a) Establish more precise locations of Arterial and Collector streets, pedestrian and bicycle facilities, and transit facilities within the Specific Plan Area;
- b) Assess additional improvements required in the project vicinity to address increased levels of travel demand that may arise from the development contemplated in the Specific Plan.
- c) Establish phasing and sequence of improvements.

9.1.4 Definitions

~~This chapter addresses transportation improvements for three areas: community transportation, County transportation, and regional transportation. These are defined as follows:~~

- ~~a) Community transportation consists of all transportation improvements within the boundaries of the Mountain House community, including roadways, bicycle and pedestrian facilities, entries and intersection improvements, and local transit facilities, and excluding County Arterials passing through the community, except for soundwalls and landscaping which are the communities' responsibilities.~~
- ~~b) County transportation consists of County Arterial roadways, including Byron Road, Grant Line Road and Patterson Pass Road, excluding soundwalls and landscaping on these Arterials.~~
- ~~c) Regional transportation consists of freeways, freeway interchanges, and regional bus and rail transit as specified in this chapter.~~

9.2 FREEWAY IMPROVEMENTS

The Mountain House site is well-situated with respect to regional transportation facilities. The community lies adjacent to two significant interstate freeways, I-205 and I-580. These two freeways serve inter-regional travel needs between the San Joaquin Valley and the greater San Francisco Bay Area. Primary access to this network of regional freeways will be via the Patterson Pass Road interchange on I-205, and via both the Patterson Pass Road and Grant Line Road interchanges on I-580. These three interchanges currently serve rural areas that are now experiencing growth in both population and employment, and shall require upgrading as noted below.

In addition to these interstate routes, there are several rural County roadways which serve the site. These include Byron Road, Grant Line Road, and Patterson Pass Road which travel through the community site. Each of these roadways provides significant connections to the surrounding region. Secondary County roads serving the site include Mountain House Road (in Alameda County) and Kelso Road (both Alameda and San Joaquin Counties.)

Assumptions:

- a) Specification of required freeway mainline improvements below assume I-205 will be widened to six lanes by the year 2000 and to eight lanes by the year 2010. Auxiliary lanes will be added to I-580 immediately west of the I-205 junction. These auxiliary lanes will not increase the capacity of I-580 to the west of the I-205 junction, but rather facilitate the merging of the two freeways, minimize backups at the junction, and improve traffic safety.
- b) Truck climbing lanes on I-580 have been studied by Caltrans as a way of mitigating the capacity-reducing effect of trucks on the uphill grade approaching the Altamont Pass. These lanes would improve traffic flow and safety on the uphill portions, but would not change in any way the capacity of the existing four-lane segment of the freeway leading downhill into the Livermore Valley. Because of the uncertainty surrounding the political feasibility and cost-effectiveness of these climbing lanes, the SJCCOG model does not assume that they are in place.
- c) Travel demand estimates used to identify necessary improvements are based on the SJCCOG regional travel demand peak hour model, using the San Joaquin County revised 2010 land use projections.
- d) Each of the phasing thresholds of specific improvements has been based upon current travel demand model runs. These runs assume a standard, ambient level of transit ridership and do not account for any trip reduction that may be achieved through Transportation Demand Management strategies. The runs are also based upon an assumed regional growth rate. Thresholds may change if results of the annual monitoring and review program, which shall incorporate current information on transit ridership, the effectiveness of TDM strategies, and regional growth, indicate significant deviation from these assumptions. Accelerated regional growth could require earlier thresholds whereas effective transit and TDM programs could enable specific transportation improvements to be delayed. Any revisions to thresholds for freeway improvements shall allow for the longer lead time necessary for completion of these projects.
- e) ~~Actual "Fair share" determinations will be based upon the community's contribution to the need for additional transportation capacities as determined by travel demand model runs that will be based on the best data assumptions of future traffic at the time of improvement design for the transportation improvements listed in this chapter.~~

Objective: To provide for a comprehensive, efficient and safe vehicular circulation system permitting access to and from the Mountain House community via the freeway system.

Policies:

- a) The community shall participate in the implementation of regional freeway improvements ~~including freeway improvement~~, on a "fair share" basis. Freeway improvements include mainline, interchanges, HOV lanes, ramp metering, truck lanes, study reports, and plans.
- b) Major improvements to State routes shall be completed in phases, consistent with the travel demand estimated by State project study reports or County improvement plans for regional transportation facilities (see Figure 9.1: Freeway and Rail Regional Transportation Improvements).
- c) Community access to I-205 and I-580 shall be directed to existing interchanges.

Implementation:

- a) Cooperative Participation. The community and the County shall participate in an Area of Benefit or similar fair share arrangement for funding improvements in conjunction with the improvement conclusions of each project study report.
- a) ~~Benefit District.~~ In conjunction with improvement conclusions of each project study report, an area of benefit district shall be set up to allocate the fair share to all parties impacting the improvement.
- b) Freeway Improvements. The community shall participate in the study and construction of identified improvements on I-205. ~~and I-580.~~
- c) Altamont Corridor. The community shall participate in the completion and implementation of a Strategic Transportation Plan for the Altamont Corridor, in cooperation with the County, State, and the City of Tracy.
- d) Freeway Interchange Improvements. The community shall participate in the study and construction of, ~~with the County, the State, and the City of Tracy, in identifying future~~ freeway interchange improvements ~~needs in the project vicinity, incorporating appropriate demand management strategies such as including ramp metering and HOV lanes.~~
- e) HOV Lanes. Should high-occupancy vehicle (HOV) lanes be added on I-205 between I-580 and Grant Line Road, a community "fair share" participation shall be required.
- f) Truck Climbing Lanes. Should truck climbing lanes be built on I-580 between I-205 and Greenville Road, the community shall provide a "fair share" participation.
- g) Freeway Interchange Schedule of Improvements. The community shall participate in project study reports and the fair share allocations determined by the reports for the freeway interchange improvements included in ~~ing~~ but not limited to, ~~those identified in~~ Table 9.1: Freeway and Rail Improvements. Schedule of Freeway Interchange Improvements. (Refer to Section 9.9.2 for discussion details of rail transit improvements) The provided schedule shall be used as a guideline for the planning schedule and revenue generation necessary to meet the group benchmarks listed in the schedule. The schedule shall not be considered as the real schedule, but rather as the current best estimate of projected traffic growth. Schedule modifications shall be varied according to the program developed in the project study report.

Table 9.1
Freeway and Rail Improvements

<u>Improvement</u>	<u>Location</u>	<u>Trigger</u>
<u>Project Study Report</u>	<u>Patterson Pass Road / I-205 Interchange</u>	<u>To be determined in Development Agreement</u>
<u>Ramp intersection signals</u>	<u>Patterson Pass Road / I-205 Interchange</u>	<u>1,600 dwelling units (DU's)</u>
<u>Add 2-lane bridge</u>	<u>Patterson Pass Road / I-205 Interchange</u>	<u>3,500 DU's</u>
<u>Add 2 loop ramps</u>	<u>Patterson Pass Road / I-205 Interchange</u>	<u>3,500 DU's</u>
<u>Add third 2-lane bridge to yield 6 lanes</u>	<u>Patterson Pass Road / I-205 Interchange</u>	<u>9,660 DU's</u>
<u>Add 1 loop ramp and widen on ramps</u>	<u>Patterson Pass Road / I-205 Interchange</u>	<u>12,880 DU's</u>
<u>Project Study Report</u>	<u>Grant Line Road / I-580 Interchange</u>	<u>To be determined by Caltrans</u>
<u>Install ramp intersection signals</u>	<u>Grant Line Road / I-580 Interchange</u>	<u>4,830 DU's</u>
<u>Widen underpass to 4 lanes</u>	<u>Grant Line Road / I-580 Interchange</u>	<u>8,050 DU's</u>
<u>Widen ramps to 2 lanes & signalize</u>	<u>Grant Line Road / I-580 Interchange</u>	<u>8,050 DU's</u>
<u>Re-align ramps to final configuration</u>	<u>Grant Line Road / I-580 Interchange</u>	<u>12,880 DU's</u>
<u>Widen I-205 from 4 to 6 lanes</u>	<u>Mainline I-580 to 11th Street</u>	<u>Funded construction estimate to begin 1997</u>
<u>Widen I-205 from 4 to 6 lanes</u>	<u>Mainline 11th Street to I-5</u>	<u>To be determined by Caltrans</u>
<u>Add auxiliary lanes to I-580</u>	<u>Mainline west of I-205 Junction</u>	<u>To be determined by Caltrans</u>
<u>Project Study Report for Upgrade of interchange</u>	<u>Patterson Pass Road / I-580 Interchange</u>	<u>May be combined with Project Study Report for Patterson Pass Road/I-205</u>
<u>Altamont Rail Station</u>	<u>Union Pacific RR near I-580</u>	<u>After passenger service is initiated</u>
<u>Mococo Line Station</u> • <u>Passenger platform</u> • <u>Multi-modal station</u> • <u>Connection to local transit service</u>	<u>SPT County Line Northwest of Byron Road / Patterson Pass Road</u>	<u>After passenger service is initiated</u>
<u>Altamont Corridor Strategic Plan preparation and implementation</u>	<u>Alameda and San Joaquin Counties</u>	<u>To be determined by Caltrans</u>

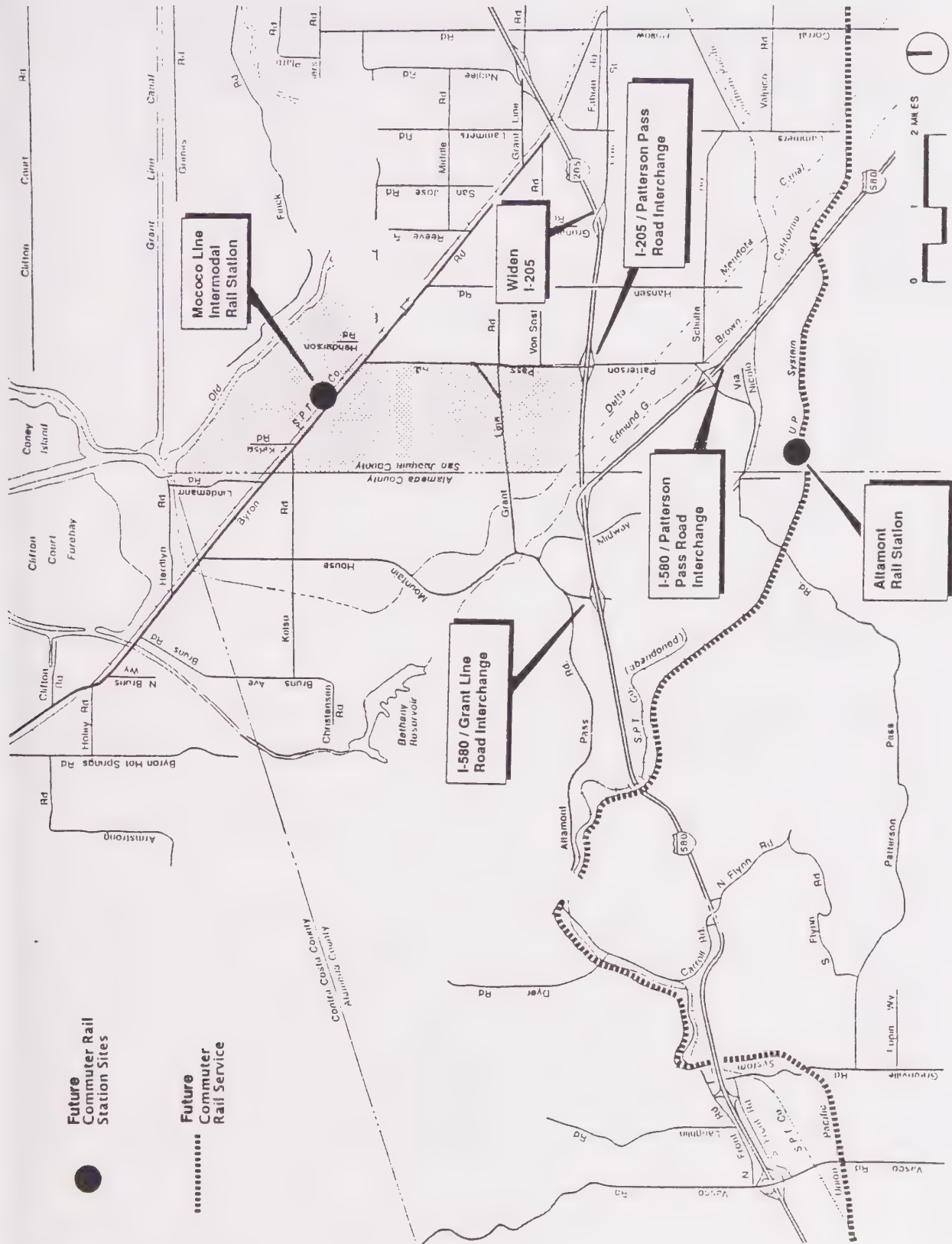


Table 9.1
Mountain House Schedule
of Freeway Interchange Improvements

Interchange Improvement	Trigger DUs	
Project Study Report	PPR/I205	1
Ramp intersection signals	PPR/I205*	1,600
Add 2-lane bridge	PPR/I205	3,500
Add 2-loop ramps	PPR/I205	3,500
Add third 2-lane bridge to yield 6 lanes	PPR/I205	9,660
Add 1-loop ramp and widen on-ramps	PPR/I205	12,880
Install ramp intersection signals	GLINE/I580	4,830
Widen underpass to 4 lanes	GLINE/I580	8,050
Widen ramps to 2 lanes & signalize	GLINE/I580	8,050
Re-align ramps to final configuration	GLINE/I580	12,880

PPR = Patterson Pass Road, GLINE = Grant Line Road

- h) Freeway Mainline Improvements. The community shall participate in project study reports, including but not limited to the freeway segments affected by the development of Mountain House, and shall participate in a fair share benefit district to the extent of the community's impacts.
- i) Determination of Fair Share. "Fair share" contribution for regional transit and freeway improvements, identified in the Master Plan, shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the design stages of the individual improvements.

9.3 COUNTY ARTERIALS

County Arterials covered in this section include all non-freeway roadways external to the community plus those Arterials that serve to carry County and Mountain House traffic directly through the community. Specifically, these include Byron Road, Patterson Pass Road, and Grant Line Road. Also included are roads located within Alameda and Contra Costa Counties and the City of Tracy. It also may, depending on fair share traffic improvement studies, include Grant Line Road, Mountain House Road, Byron Road and Kelso Road within the boundaries of Alameda and Contra Costa Counties and the City of Tracy. Other County roads of lower use will also be included in future studies to a lesser extent. This section specifically covers lane needs, intersections, and traffic planning on Arterials in and near the community that are commonly used by all County residents. Design details for these roads are covered in Section 9.5, On-Site Roadway Circulation and Design.

Assumptions and Definitions:

- a) Designated improvements to County roadways are intended to maintain LOS C during peak periods on all roads except State facilities, which may operate at LOS D, and County road segments which function as Mountain House Gateways.
- b) Mountain House Gateway road segments include Grant Line Road from the County line to east of Patterson Pass Road; Patterson Pass Road from Byron Road to I-205; and Byron Road from the County line to Wicklund Road.
- c) The portions of the County Arterials, Grant Line Road, Byron Road and Patterson Pass Road immediately adjacent to or within the boundaries of the community shall be considered County Arterials only as to the road and walkway portions. Soundwalls and landscaping shall be considered part of the community's internal roadways.

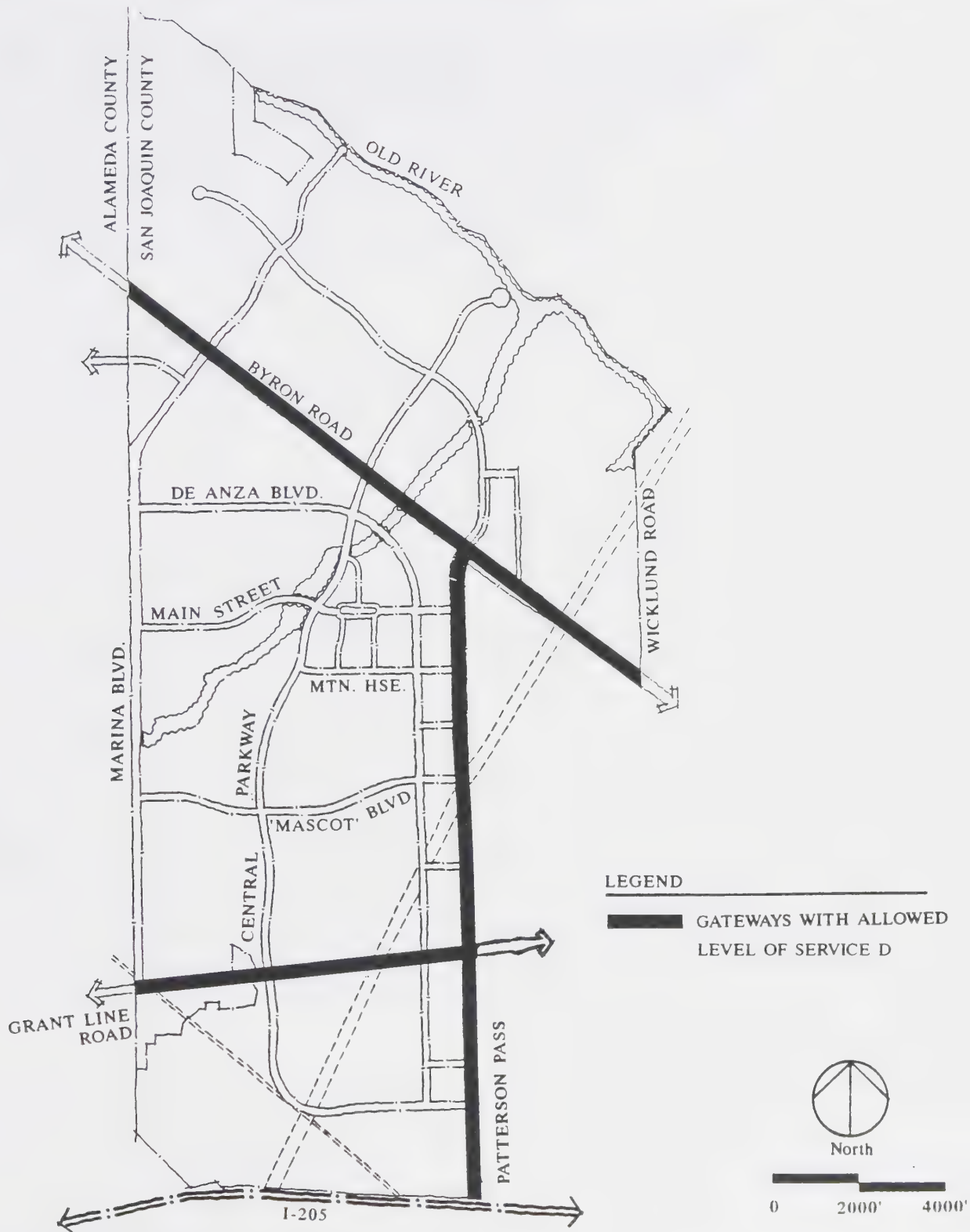
Objective: To adequately plan for and assign fair share responsibility to all County Arterials that may be significantly impacted by the community.

Policies:

- a) To avoid over-designing the local roadway system and further encouraging the use of single-occupant vehicles during commute periods, designated improvements at community gateway locations shall be designed to maintain a minimum of LOS D (see Figure 9.2: Roadways with Allowed LOS D).
- b) LOS D shall be allowed during peak hours on Mountain House Gateway road segments in order to discourage single occupant vehicle commuting and to encourage and support the use of alternative modes of travel including buses and high occupancy vehicles.
- c) The community shall participate on a ~~proportionate~~ "fair share" basis for improvements to Byron Road, Patterson Pass Road, ~~and Grant Line Road, and other roads affected by the buildout of the community to allow non-community traffic to move through and around the community rapidly and efficiently~~ (see Figure 9.1).
- ~~d) Traffic signals, turn lanes, and additional through lanes shall be utilized to preserve the flow of traffic on County Arterials.~~
- d) The community shall, when it is determined by the County to be the primary new traffic contributor, initiate or fund, at the discretion of the County, appropriate traffic studies and improvement measures for all County Arterials listed in Table 9.2: County Arterial Road Improvements when such Arterials are impacted by the community.
- e) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures for all County Arterials impacted by the community.
- f) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures with other Counties or cities whose roadways are impacted by the community. ~~; provided that the other jurisdictions allow equal consideration of their jurisdiction's traffic impacts on Mountain House~~

Implementation:

- a) County Arterial Studies and Improvements. The community shall be responsible for initiating traffic studies and improvements consistent with Table 9.2.: County Arterial Road Improvements.
- a) ~~Traffic Studies. Traffic studies shall be initiated, as directed by the above policies, to determine design specifications and fair share improvement measures based on the projected improvements schedule and phasing listed in Table 9.2.: Mountain House Schedule of Anticipated County Arterial Road Improvements.~~
- b) Specific Plan Requirements. Each Specific Plan and accompanying environmental review shall assess the transportation impacts of Mountain House development on other Counties or cities.
- c) ~~Determination of Fair Share. "Fair share" contribution toward improvement of County Arterials, identified in this Master Plan, shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share for a given improvement project shall be made during the funding stages of the individual improvements.~~
- c) County Traffic Impact Mitigation Fee Program. The County "Traffic Impact Mitigation Fee" (TIMF) program shall be amended to create a Mountain House planning area, and to include County Arterials, Patterson Pass Road, Grant Line Road, and Byron Road in the TIMF system as regional facilities. When the amendment is approved by the Board of Supervisors, the community can receive fee credit for County Arterial improvements as identified in the TIMF program. The TIMF program amendment and supporting engineering report shall be funded by the Master Developer and shall be approved by the Board of Supervisors prior to the submittal of the first Development Permit. The local portion of fees collected within this planning area shall be used to fund County Arterial improvements as identified in the Engineer's Report of the TIMF program within Mountain House. The TIMF program amendment and supporting engineering report shall be funded by the Master Developer and shall be approved prior to the submittal of the first Development Permit.
- d) Cooperative Participation. To determine fair share participation of the community and other area property owners and impacted jurisdictions, formal arrangements shall be made for joint financial participation by all parties concerned with a given improvement. The community and the County shall initiate formation of the joint power authority for the study and improvements identified in Table 9.2: County Arterial Road Improvements.
- e) ~~Benefit Districts. Areas of benefit districts shall be formed when appropriate to determine fair share participation of the community and other area property owners and impacted jurisdiction.~~



Gateway with Allowed Level of Service D

Table 9.2
County Arterial Road Improvements

Road Segment	Lanes	Trigger DU's
Patterson Pass, Byron to I-205	To 4	4,100
Patterson Pass, Central to I-205	To 6	9,660
Patterson Pass, Central to I-205	To 8	12,080
Patterson Pass, Main to Byron Road	To 6	12,080
Patterson Pass, I-205 to I-580	To 4	12,080
Grant Line, Patterson Pass to Alameda County	To 4	8,050
Grant Line, Patterson Pass to Byron Road	To 4	11,260
Grant Line, Alameda line to I-580	To 4	9,660
Byron Road, Patterson Pass to Marina Boulevard	To 4	8,050
Byron Road, Marina Boulevard to Alameda County	To 4	12,080
Byron Road, Patterson Pass to Grant Line	To 4	9,660
Byron Road, Patterson Pass to Wicklund	To 6	12,080

~~Note: County Arterials covered in this table include lengths within or bordering the community. Trigger buildout is of all land uses designated by the Master Plan based on the Mountain House EIR traffic model. This table addresses County Arterials only and does not address roadways internal to the community that are not County Arterials~~

- e) Community Participation. If warranted by the traffic monitoring program, or, if initiated by others, the community shall participate in the traffic studies and improvement measures for improvements not listed in Table 9.2, including the following: Eleventh Street, Byron Road (south of Grant Line Road), existing Grant Line Road (east of Byron Road), new Grant Line Road (realigned section east of Byron Road), grade separation at Grant Line Road crossing the Southern Pacific railroad tracks (City of Tracy), Middle Road extension (from Gold Rush City to Mountain House), (Cities of Lathrop and Tracy), Altamont Pass Road (Alameda County), Byron Highway (Contra Costa County). The community shall participate in the traffic studies and improvement measures for improvements not listed on the Table 9.2 schedule if warranted by the traffic monitoring program, or, if initiated by others, when it is determined that the community will have a significant traffic impact on the needed improvement.
- f) Community Participation. The community shall, to the extent of its fair share, participate in upgrading pavement sections and/or safety improvements (e.g., standard pavement widths and paved shoulders) on rural roads, including Bethany, Kelso, Hansen, Von Sosten, Reeve, Middle, and Tracy Boulevards where necessary to alleviate additional traffic caused by the project.
- g) The community shall submit a Construction Truck Management Plan prior to the issuance of the first Development Permit. The Plan shall identify the preferred routes for trucks bringing construction materials to the site, and shall include measures to ensure compliance by General Contractors.

- h) Prior to the submittal of the first Development Permit, Grant Line Road (from Byron Road to I-580) shall be studied to determine whether it meets current road standards or has deficiencies not identified under previous model assumptions. the study shall include an improvement schedule if upgrading improvements are needed prior to road widening. The study shall be prepared by the CSD and approved by the County.
- i) Prior to the widening of Grant Line Road in the vicinity of Grant Line Village, the CSD shall prepare a noise study to determine future noise impacts and to identify measures which can mitigate, if feasible, exterior residential noise levels to 65 dB Ldn. Any approved mitigation measures shall be implemented at the same time the road widening is constructed.

9.4 ARTERIAL INTERSECTIONS

Objective: To ensure that traffic, on all Arterials in and around the community, flows in a safe and efficient manner in compliance with County LOS standards.

Policies:

- a) Intersections on existing County Arterials shall be spaced at least 1/8 mile apart. New driveways and minor access points shall be prohibited on existing County Arterials. Existing driveways and access points may remain, but shall be encouraged to relocate. No new building or increased traffic uses shall be allowed on existing access points.
- b) The community shall to the extent of its fair share, provide signalization and channelization at County Arterial intersections within the traffic impact area of the community.
- c) Safe intersections shall be provided through properly designed signalization and lane channelization at appropriate locations.

Implementation:

- a) Traffic Signals. Traffic signals will be provided within the community at 12 County major Arterial intersections, which are on existing County Arterials as identified in Table 9.3 and shown in Figure 9.3: Intersection Signalization and Channelization.

Signalization at County Arterial Intersections

Table 9.3
Signalization at County Arterial Intersections

- | | |
|-----|---|
| 1. | Byron Road and North Marina Blvd. |
| 2. | Byron Road and Patterson Pass Road (*) |
| 3. | Byron Road and Henderson Road (*) |
| 4. | Patterson Pass Road and Main Street |
| 5. | Patterson Pass Road and Mountain House Blvd. (*) |
| 6. | Patterson Pass Road and Mascot Blvd. (*) |
| 7. | Patterson Pass Road and Grant Line Road(*) |
| 8. | Patterson Pass Road and Van Sostan |
| 9. | Patterson Pass Road and South Central Parkway (*) |
| 10. | Grant Line and De Anza Boulevard |
| 11. | Grant Line and Central Parkway |
| 12. | Grant Line and Marina Boulevard |

- b) Requirements at 4,100 DU Buildout. Of the intersections specified in a) above, those shown with an * shall be completed upon 4,100 DU Master Plan buildout or sooner, if standard signal warrants are met prior to 4,100 DU Master Plan buildout in terms of traffic. Each Specific Plan shall include provisions for necessary intersection improvements required to serve the cumulative traffic of the community.

Monitoring of intersections within and immediately adjacent to the site for signal warrants shall be required on an annual basis.

- c) Community Arterial Intersections. Intersection signalization shall be required at the community Arterial intersections listed in Table 9.4 below and shown on Figure 9.3: Intersection Signalization and Channelization.

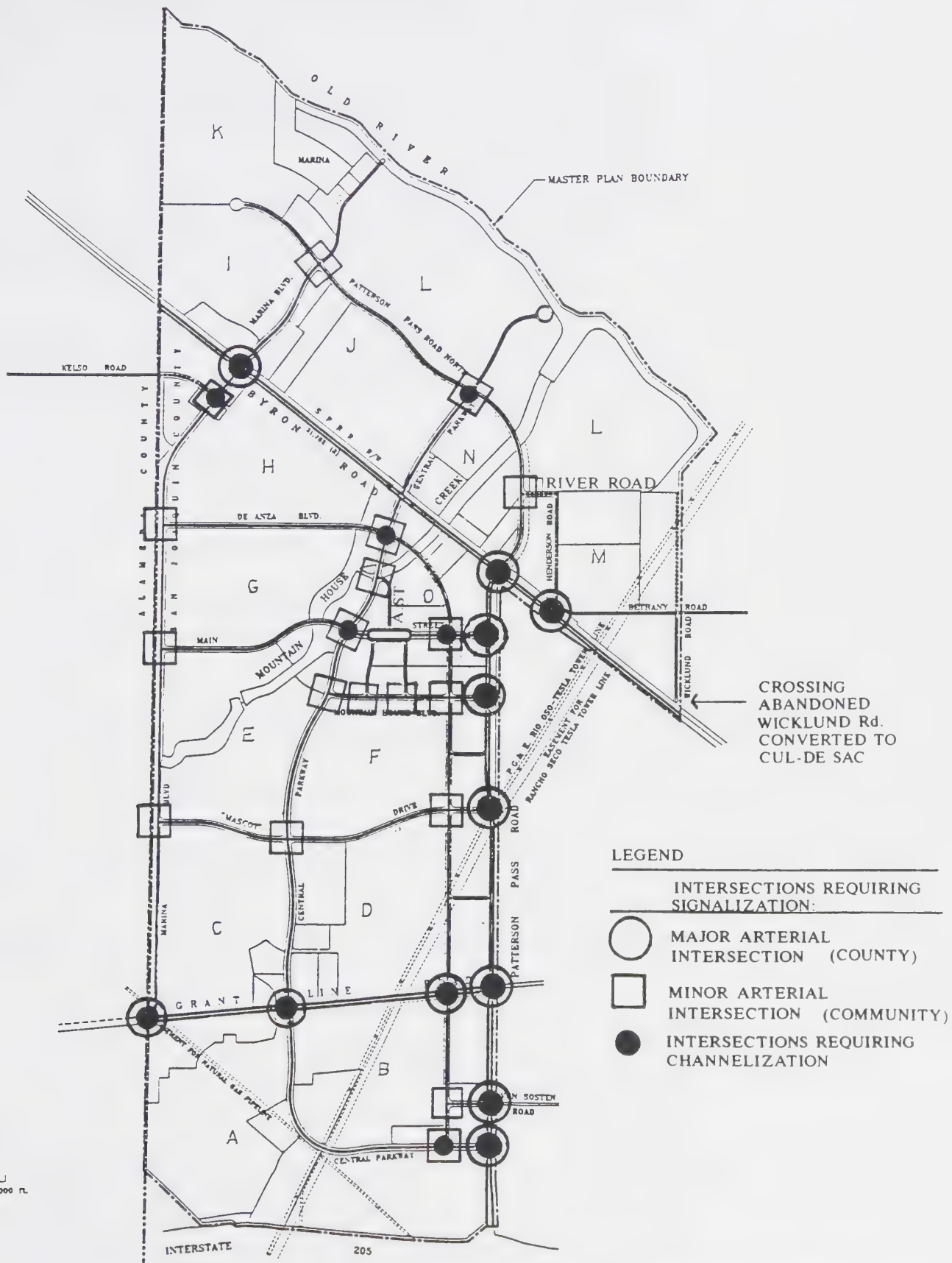
Table 9.4 Signalization at Community Arterial Intersections	
1.	Central Parkway and North Patterson Pass Road
2.	Central Parkway and De Anza Boulevard
3.	Central Parkway and A Street
4.	Central Parkway and Main Street
5.	Central Parkway and Mountain House Boulevard.
6.	Central Parkway and Mascot Boulevard
7.	De Anza Boulevard and Mascot Boulevard
8.	De Anza Boulevard and Mountain House Boulevard
9.	De Anza Boulevard and Main Street
10.	De Anza Boulevard and Marina Boulevard
11.	Marina Blvd. and North Patterson Pass Road
12.	Marina Blvd. and Kelso Road
13.	Marina Blvd. and Main Street
14.	Marina Blvd. and Mascot Boulevard
15.	North Patterson Pass Road and River Road
16.	<u>De Anza Boulevard and Van Sostem</u>
17.	<u>C Street and Mountain House Boulevard</u>
18.	<u>D Street and Mountain House Boulevard</u>

- d) Channelization. Channelization, that is, provision of additional turn and storage lanes, shall be provided at 17 46- intersections on and adjacent to the site (see Figure 9.3: Intersection Signalization and Channelization) as follows in Table 9.5.

Table 9.5
Channelization at Intersections

Byron Road and North Marina Blvd.
Byron Road and Patterson Pass Road
Byron Road and Henderson Road
Patterson Pass Road and Main Street
Patterson Pass Road and Mountain House Boulevard
Patterson Pass Road and Mascot Blvd.
Patterson Pass Road and Grant Line Road
Patterson Pass Road and Van Sosteen Road
Patterson Pass Road and Central Parkway
Grant Line and De Anza Boulevard
Grant Line and Central Parkway
Grant Line and Marina Boulevard
Central Parkway and De Anza Boulevard
Central Parkway and Main Street
De Anza Boulevard and Main Street
Marina Boulevard and Kelso
<u>Central Parkway and Patterson Pass Road North</u>

- e) Coordination with Roadway Improvements. All signalization and channelization shall be provided in conjunction with the roadway improvements or as needed if traffic studies support a deferral.
- f) Determination of Fair Share. "Fair share" contribution toward improvement of County Arterial intersections identified on Table 9.3 shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the design stages of the individual improvements.



Intersection Signalization and Channelization

9.5 ON-SITE ROADWAY CIRCULATION AND DESIGN

This section covers internal street circulation and design details and standards for all community roads including soundwalls and landscaping for County Arterials that pass through or are immediately adjacent to the community.

The on-site circulation system for Mountain House includes a coordinated system of Arterial and Collector roadways to provide vehicular access throughout the community. The hierarchy of streets balances accessibility and protects residential neighborhoods from through traffic. (see Figure 9.4: Roadway Classification Diagram, and Section 3.4.2: Residential Site Planning and Design).

Bridge structures over existing waterways, such as Mountain House Creek, and culvert structures at minor creeks, canals and ditches are also included in the on-site circulation system design. A new grade-separated structure on Central Parkway over Byron Road and SPRR will serve as an Arterial link to the marina area.

Landscape treatments of on-site roadways are depicted in Figures 9.5 to 9.29 and are further described in Chapter Four: Development and Design and Appendix 4-A: Mountain House Design Manual.

Assumptions:

- a) Travel demand estimates used to identify the desired circulation system design and necessary on-site improvements are based on the San Joaquin County Council of Governments (SJCCOG) regional travel demand peak hour model, using the San Joaquin County revised 2010 land use projections.

Objective: To facilitate the movement of vehicular traffic within the community by providing a safe, efficient, and easily understood on-site circulation system. ~~at a LOS C for all roadways except at certain gateway locations.~~

Policies:

- a) Pavement widths shall be minimized, consistent with safety considerations, to reduce development costs and improve the visual appearance and scale of street corridors, especially within neighborhoods.
- b) Design standards for local streets shall be based upon the needs of the neighborhood, only, and shall ensure that:
 - Pedestrian safety will not be compromised.
 - The width of the street is based upon the number of cars expected to use that street.
 - The street will safely accommodate the expected traffic.
 - The arrangement of streets encourage short, quiet streets, that discourage through traffic.
- c) Road signs shall be developed in accordance with County policy and broadly adopted guidelines on uniform traffic signage. This applies to regulatory, warning, and guidance signs.
- d) Access standards shall define appropriate level of access to and from each type of street in the functional classification system. Unsignalized “right turn in, right turn out”

intersections (excluding those in Table 9.3) may be permitted on major Arterials, if consistent with safety criteria such as sight distance and minimum spacing.

- e) Minor Arterials and Collector streets may have unsignalized intersections, in addition to those that are signalized.
- f) Driveways serving individual homes are prohibited from Arterials. Driveways for individual homes may be accessed from Collectors, except for homes fronting Mascot Boulevard. Access to residential lots fronting on Central Parkway shall be from local streets, common driveways, or alleys.
- g) In commercial areas, a pedestrian-oriented street design shall be developed, including on-street parking, that is conducive to an active street life and meets minimum pedestrian crossing requirements contained in standard urban design guidelines.
- h) Landscaped medians shall be constructed along high volume major Arterials, and driveway access and on-street parking shall be prohibited (see Chapter Four for landscape treatments).
- i) Roadways within the community shall be constructed in coordination with phased development to accommodate vehicular travel demand and to minimize intrusion of through traffic into residential neighborhoods.
- j) Stormwater runoff from publicly owned alleys shall be directed to publicly owned collection and disposal facilities. Runoff from privately owned alleys shall be directed to public or private facilities, depending on the nature of the development being served by the alley.
- k) Residential access streets may intersect or take access from any street type. Turning movements may be restricted where local streets intersect with major Arterials.
- l) Collector Residential Streets shall be the primary means of movement through and between neighborhoods.
- m) To improve traffic flow and reduce automobile emissions, traffic signals throughout Mountain House shall be synchronized to the maximum extent possible.
- ~~n) Lane striping shall be required for all Arterial streets. Collector streets may be striped based upon a determination by the Department of Public Works. Local streets shall not be striped.~~
- n) Assignment of speed limits shall take into account several factors including design speed, sight distance, adjacent land use, and street function. Limits typically are 35 to 45 miles per hour (mph) on Major Arterial streets, and 25 to 30 mph on Minor Arterials and Collector streets.

Implementation:

- a) Corner Radii. Street corner radii shall be as small as possible to minimize pedestrian crossing distances (maximum curve radii of 20 to 30 feet for Arterials and Collectors, and 10 to 20 feet for local streets). Bulb or bumpout corner radii may be used where it can be determined that safety will not be impaired. Radii less than 20 to 25 feet should not be used for street corners at intersections which are (or may be) part of a transit route or school bus route.

- b) Speed Limits. Speed limits shall be established on individual Arterial and Collector streets as specified in the Design Manual. Special speed zones shall be identified as dictated by sensitive land uses such as schools, hospitals, or other institutional uses.
- c) Intersection Spacing. Arterials shall have access limited to signalized intersections at minimum 1/8 mile spacing. Intersections of Collector streets with other Collector streets shall be spaced no closer than 300 feet. Intersections or offsets of local streets with Collector streets shall be spaced no closer than 200 feet.
- d) Street Classifications. Classification of the streets including Major Arterial, Minor Arterial and Collector streets, shall be as cited in Figure 9.4: Roadway Classification Diagram.
- e) Typical Sections. Roads within the community shall be designed according to the typical sections shown by Figures 9.5 through 9.29. Travel lanes shall be measured to exclude the gutter-pan. Parking lanes shall be measured to include the gutter-pan.
- f) Street Locations. Final locations of Residential Collector Streets shall be designated in each Specific Plan.
- g) Loop Streets. Both ends of local loop streets shall intersect the same collecting street in order to discourage through traffic.
- h) Limit on Residential Drives. No more than 16 homes may be served by a street with a single point of access.
- i) Intersections. The intersecting angle between two streets shall not deviate from the perpendicular by more than 10°.
- ~~j) Deceleration/Turning Lanes. Deceleration or turning lanes shall be required along existing and proposed streets as determined by a traffic study to be completed prior to the submittal of all appropriate Development Permits.~~
- j) Sidewalks. Sidewalks shall be a minimum of five feet in width. Sidewalks shall be constructed at the same time as street connections between residential areas and schools and parks.
- ~~k) Rolled Curbs. Local and Collector residential streets shall utilize a "rolled curb" section to the extent possible, in order to minimize the impacts of individual driveway cuts, except for Type I Local Streets, which shall utilize a vertical curb.~~
- k) Alley Standards. Alleys serving individual or group residential units may be permitted. Design, construction and maintenance standards for alleys shall be developed and approved by the County prior to submittal of the first Development Permit. All alleys shall be designed to meet or exceed County Standards for drainage, lighting, and structural sections for accommodation of garbage trucks. Widths of alleys shall allow single turn access to garages by a full sized automobile.
- l) Sidewalk Widths. Sidewalks shall be a minimum of five feet in width, except where adjacent to rolled curbs where they shall be a minimum of six feet in width, excluding the curb.

- m) Alley Standards. Alleys serving individual or group residential units may be permitted. Design, construction and maintenance standards for alleys shall be developed and approved by the County prior to submittal of the first Development Permit. All alleys shall be designed to meet or exceed the minimum standards for pavement design and drainage appropriate for the type of development being served.

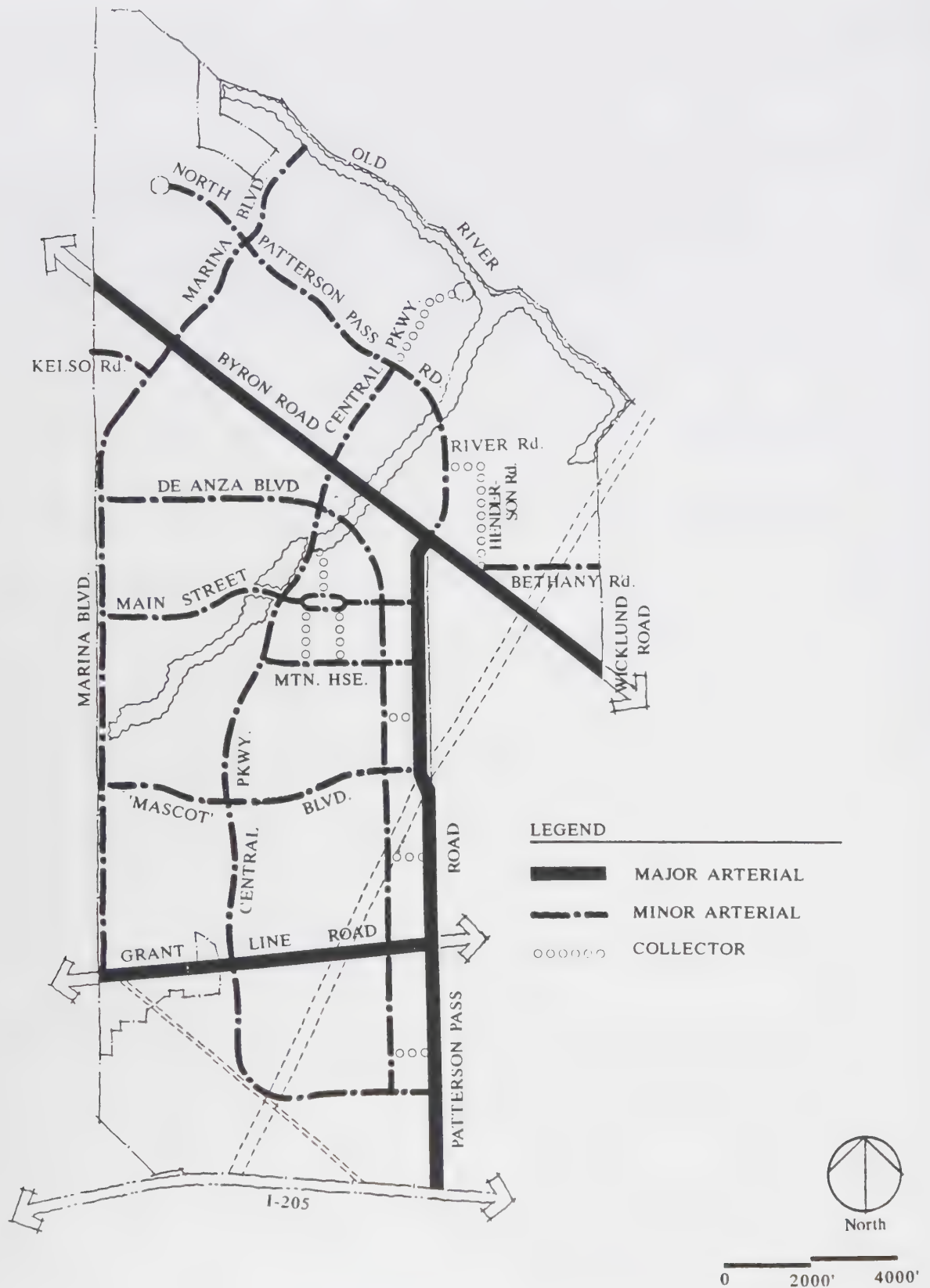
Table 9.6
Mountain House Road Classifications and Standards

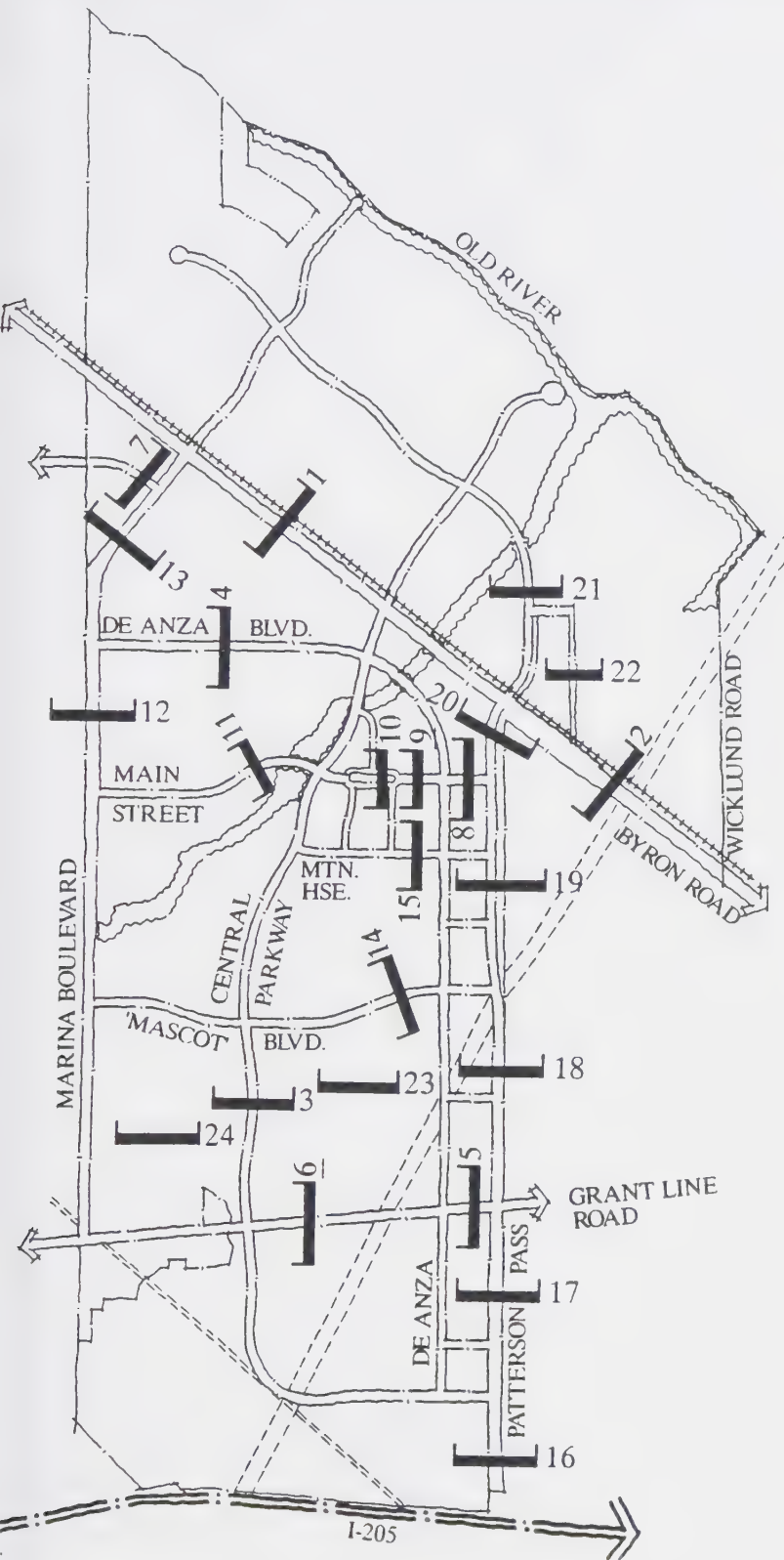
	Right-of-Way*	Number of Lanes	Access Control	Capacity (Vehicles/Day)	On-Street Parking
Major Arterial	108'-156'	4-6	Partially controlled intersections and access; at grade	35,000-45,000	No
Minor Arterial	110'-136'	4	Intersections at grade; partially controlled access	25,000	Yes Both Sides
Residential Collector	62'	2	Intersections at grade; driveway access	7,000	Yes Both Sides
Local Residential Type I	45'-54' 39'-50'	2	Intersections at grade; driveway access	300	Yes One or Both Sides
Local Residential Type II	49'-58' 43'-54'	2	Intersections at grade; driveway access	600	Yes Both Sides
Local Residential Type III	53'-62' 47'-58'	2	Intersections at grade; driveway access	1,500	Yes Both Sides
Local Commercial & Industrial	60'-84'	2	Intersections at grade; driveway access	7,000-10,000	Limited

Notes:

9/8/94

1. Standards are all minimums.
2. See roadways sections for pavement widths.
3. Right-of-way includes all public land within the street boundaries including roadway median, walks, paths, landscaping and soundwalls.





LEGEND

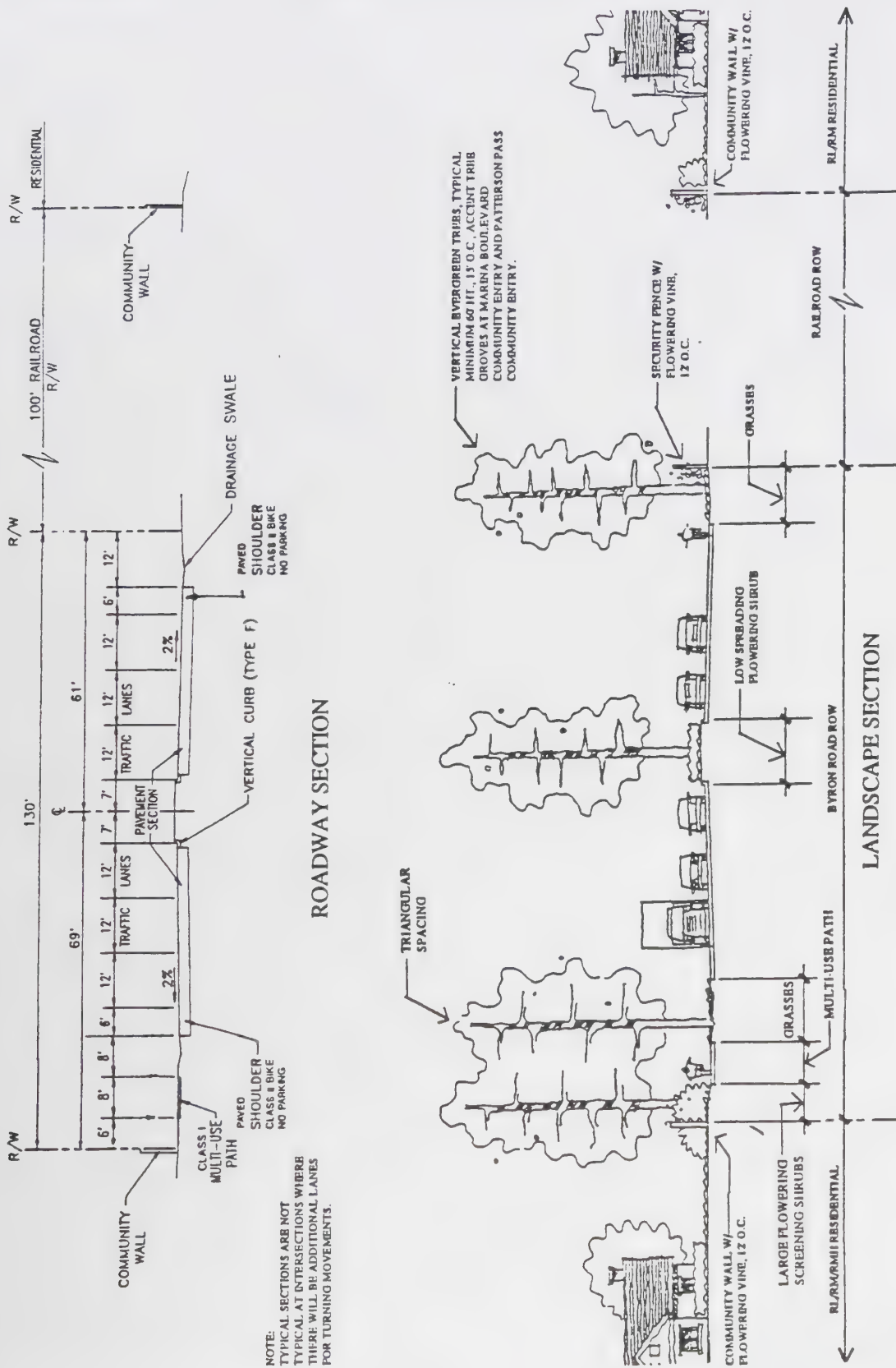
CROSS SECTIONS:

- 1 Byron Road (FIG. 9.6)
(Patterson Pass Rd. to Alameda County Line)
- 2 Byron Road (Wicklund Rd. to Patterson Pass Rd.) (FIG. 9.7)
- 3 Central Parkway (FIG. 9.8)
- 4 De Anza Boulevard (FIG. 9.9)
- 5 Grant Line Road
(Between Patterson Pass Rd. and De Anza Blvd.) (FIG. 9.10)
- 6 Grant Line Road (West of De Anza Blvd.) (FIG. 9.11)
- 7 Kelso Road (FIG. 9.12)
- 8 Main Street
(Patterson Pass Rd. to De Anza Blvd.) (FIG. 9.13)
- 9 Main Street (De Anza Blvd. to County Line) (FIG. 9.14)
- 10 Main Street (at Village Green) (FIG. 9.15)
- 11 Main Street (West of Central Parkway) (FIG. 9.16)
- 12 Marina Boulevard (Adjacent to County Line) (FIG. 9.17)
- 13 Marina Boulevard
(From County Line to Patterson Pass Rd. North) (FIG. 9.18)
- 14 Mascot Boulevard (FIG. 9.19)
- 15 Mountain House Boulevard (FIG. 9.20)
- 16 Patterson Pass Road (I-205 to Central Parkway) (FIG. 9.21)
- 17 Patterson Pass Road
(Central Parkway to Grant Line Rd.) (FIG. 9.22)
- 18 Patterson Pass Road
(Grant Line Rd. to Mascot Blvd.) (FIG. 9.23)
- 19 Patterson Pass Road
(Mascot Blvd. to Main St.) (FIG. 9.24)
- 20 Patterson Pass Road (Main St. to Byron Rd.) (FIG. 9.25)
- 21 Patterson Pass Road (North of Byron Rd.) (FIG. 9.26)
- 22 Collector, Industrial (FIG. 9.27)
- 23 Collector, Residential (FIG. 9.28)
- 24 Local Residential, Type I (FIG. 9.29)
Local Residential, Type II
Local Residential, Type III



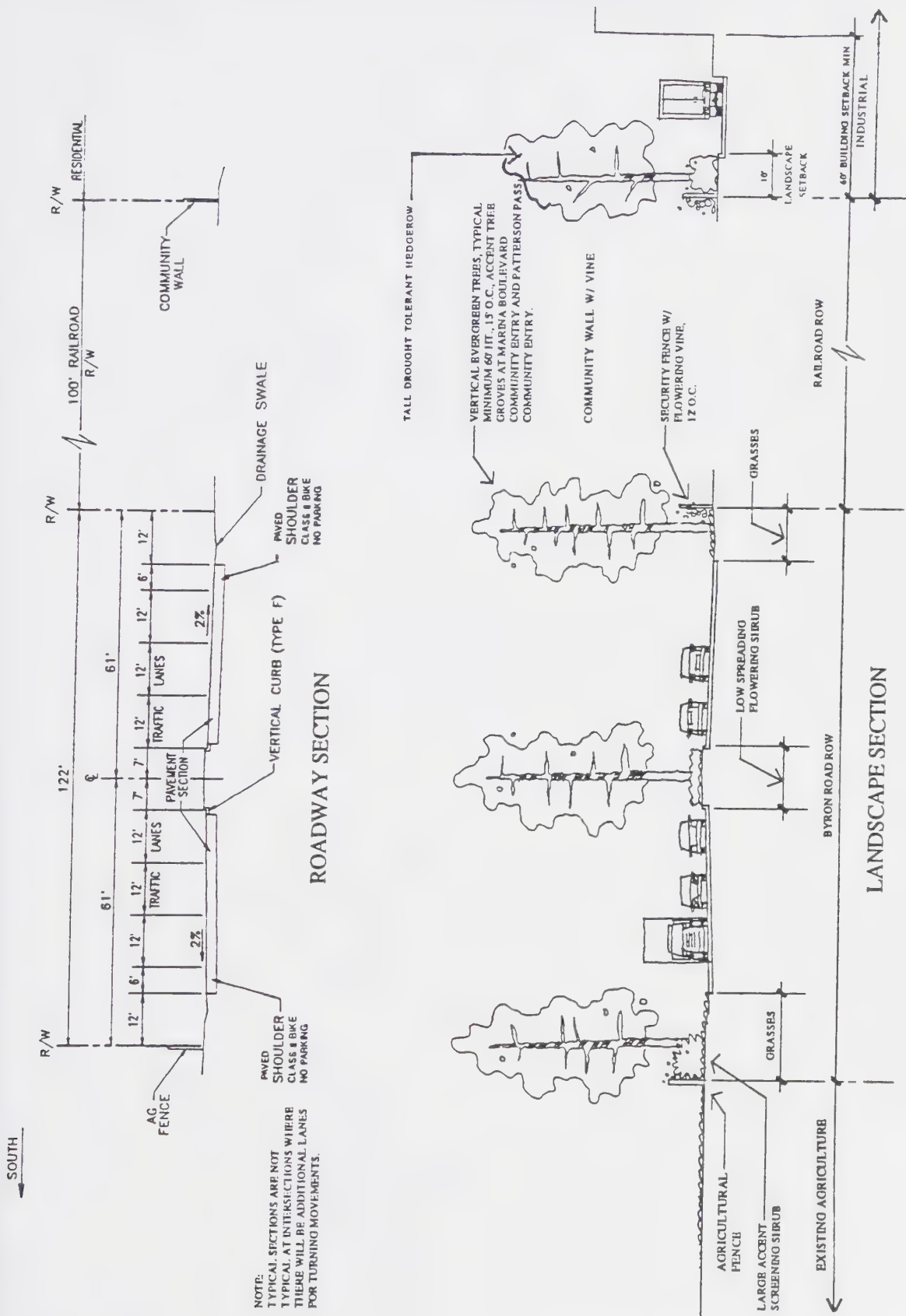
0 2000' 4000'

NOTE: BICYCLE AND PEDESTRIAN NETWORKS ARE ILLUSTRATED IN FIGURE 9.30.



Byron Road (Patterson Pass to Alameda County Line) - Major Arterial

Source: Siegfried Engineering /SWA



Byron Road (Wicklund Road to Patterson Pass Road) - Major Arterial





NOTE:
TYPICAL SECTIONS ARE NOT
TYPICAL AT INTERSECTIONS WHERE
THERE WILL BE ADDITIONAL LANES
FOR TURNING MOVEMENTS.

TALL, DECIDUOUS TREE 30' O.C.,
INTERRUPTED BY FLOWERING
ACCENT TRIE CLUSTERS AT ALL
COLLECTOR STREET
INTERSECTIONS,
NEIGHBORHOOD ENTRIES,
ARTIAL STREET
INTERSECTIONS, AND CUL-
SAC/PIEDRIAN ACCESS

TRIANGULAR SPACING -

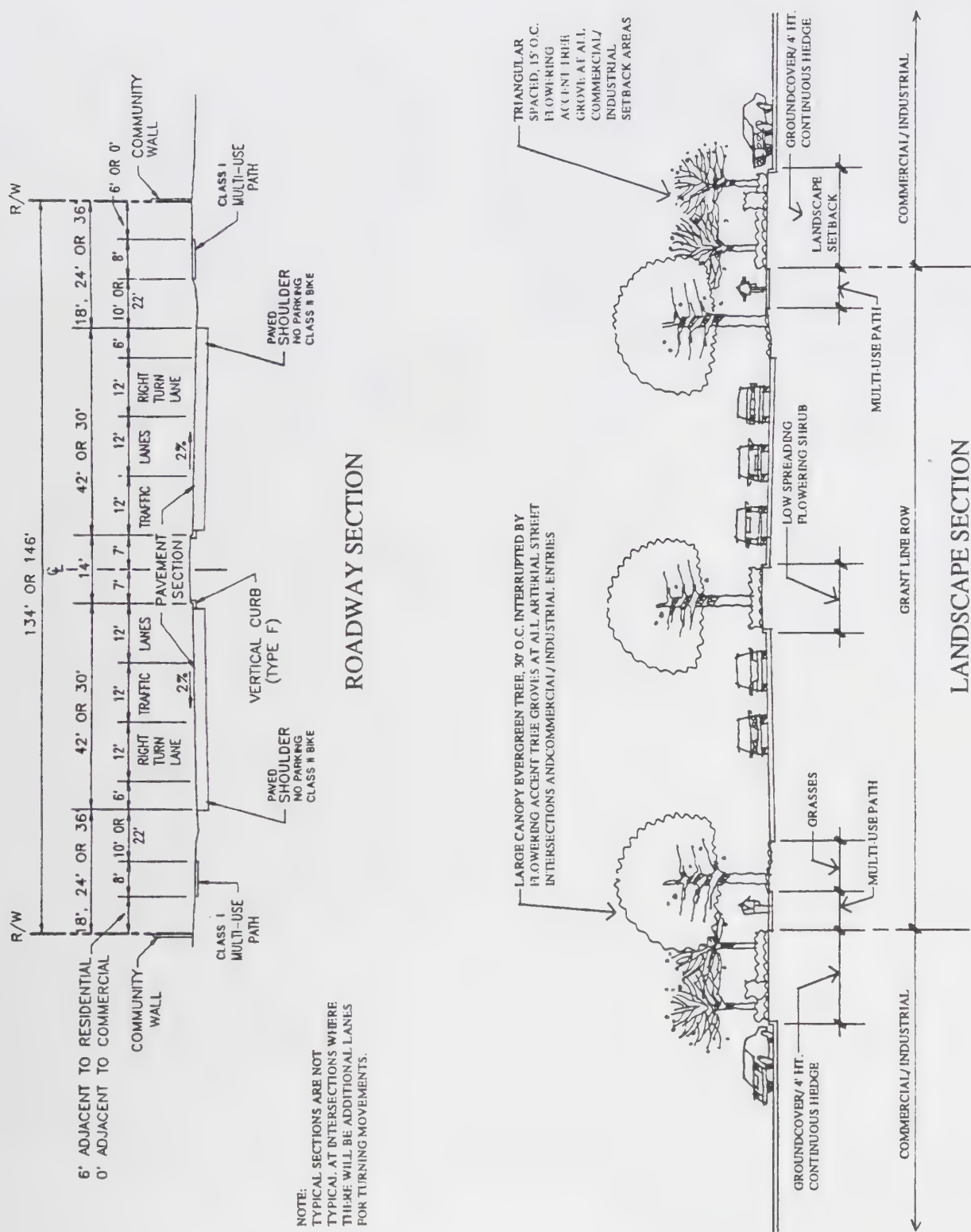
TRIANGULAR SPACED,
15" O.C. FLOWERING
ACCENT TREE GROVES
AT ALL COMMERCIAL/
INDUSTRIAL SETBACK
AREAS

COMPRI PRESIDENTI

THE UNIVERSITY OF CHICAGO

COMMERCIAL/INDUSTRIAL

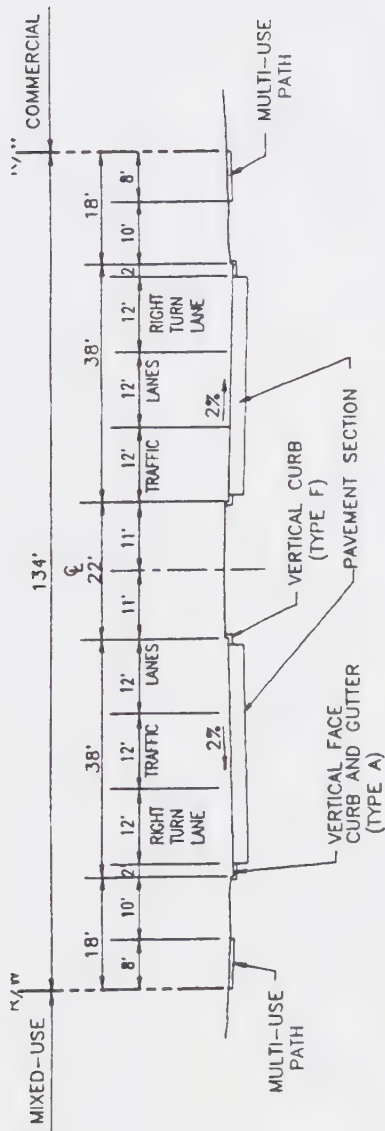
LANDSCAPE SECTION



Grant Line Road (Between Patterson Pass Road and De Anza Blvd.) - Major Arterial





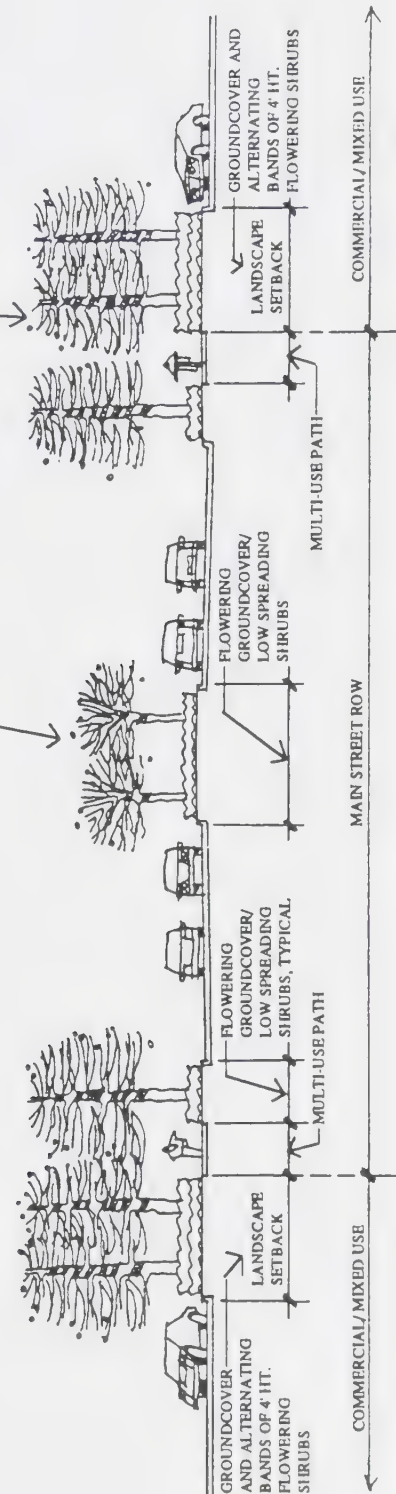


NOTE:
TYPICAL SECTIONS ARE NOT
TYPICAL AT INTERSECTIONS WHERE
THERE WILL BE ADDITIONAL LANES
FOR TURNING MOVEMENTS.

ROADWAY SECTION

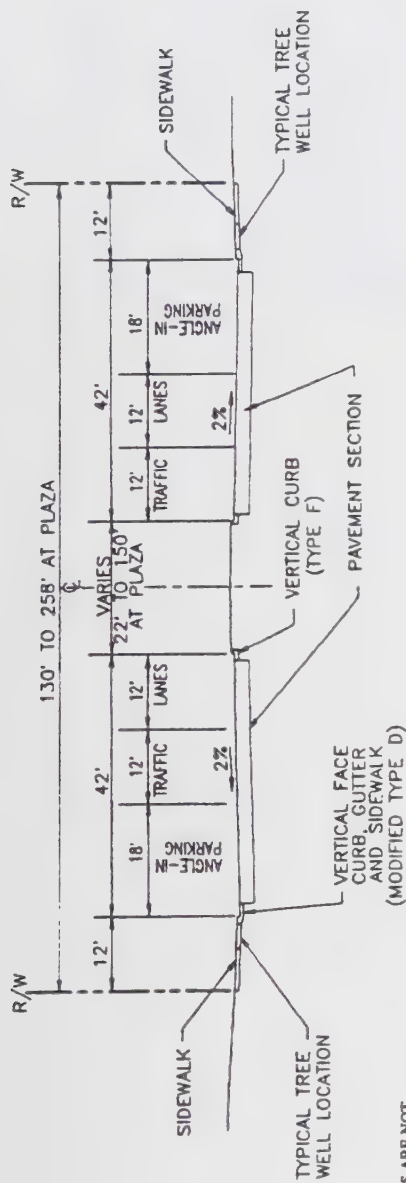
TRIANGULAR SPACED, 30' O.C. LARGE
CANOPY DECIDUOUS STREET TREE,
INTERRUPTED BY FLOWERING
ACCENT TREE GROVES AT ALL
ARTERIAL INTERSECTIONS,
COLLECTOR STREET INTERSECTIONS,
AND COMMERCIAL ENTRIES.

TRIANGULAR SPACED,
15' O.C. FLOWERING
ACCENT TREE



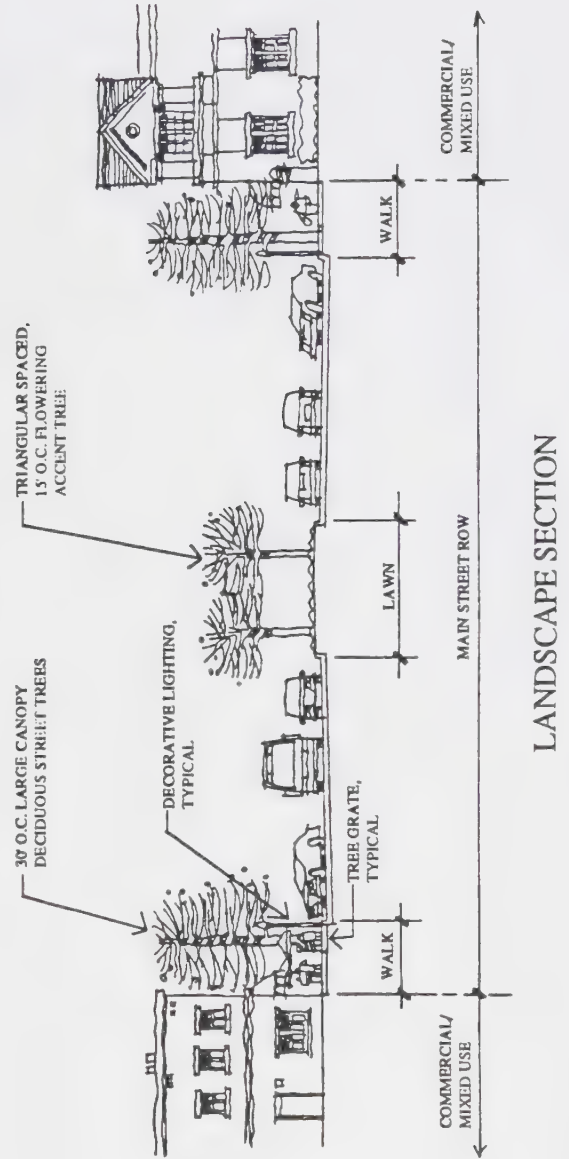
LANDSCAPE SECTION

Main Street (Patterson Pass Road to De Anza Boulevard) - Major Arterial



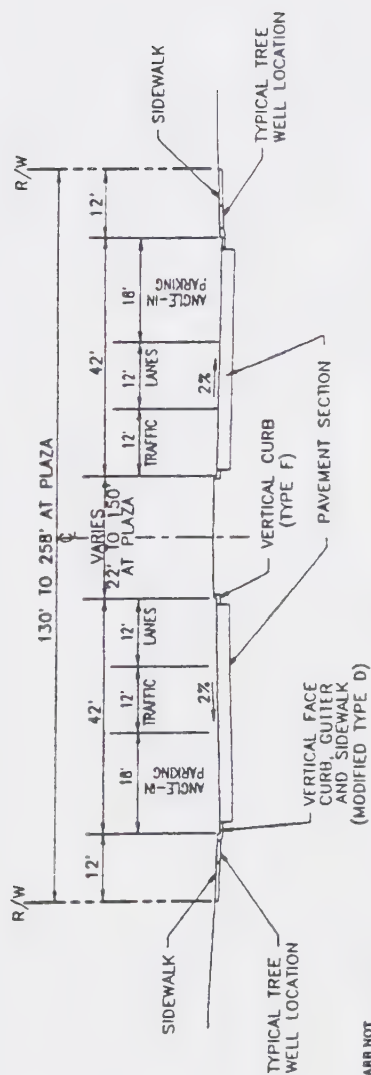
NOTE:
TYPICAL SECTIONS ARE NOT
TYPICAL AT INTERSECTIONS WHERE
THERE WILL BE ADDITIONAL LANES
FOR TURNING MOVEMENTS.

ROADWAY SECTION



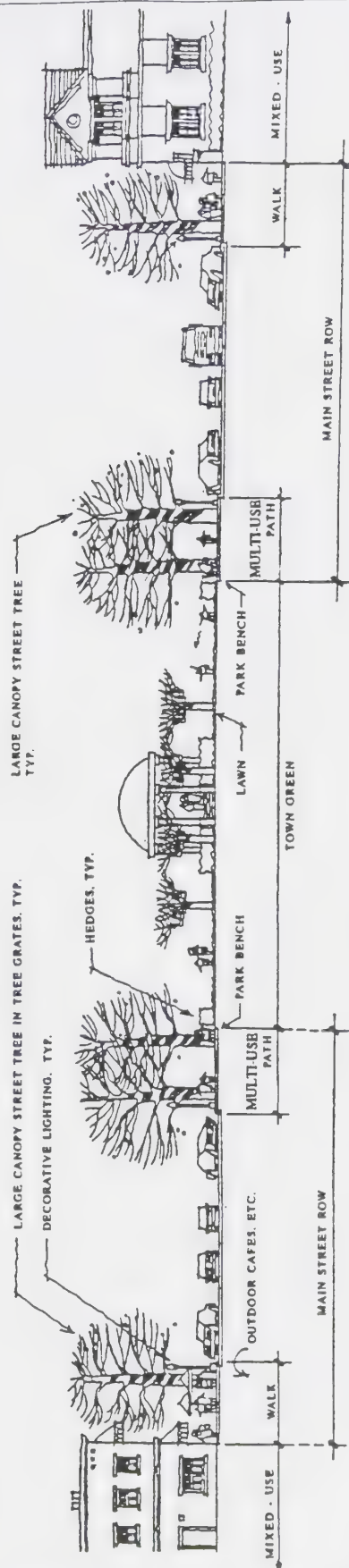
LANDSCAPE SECTION

Main Street (De Anza Boulevard to Central Parkway)



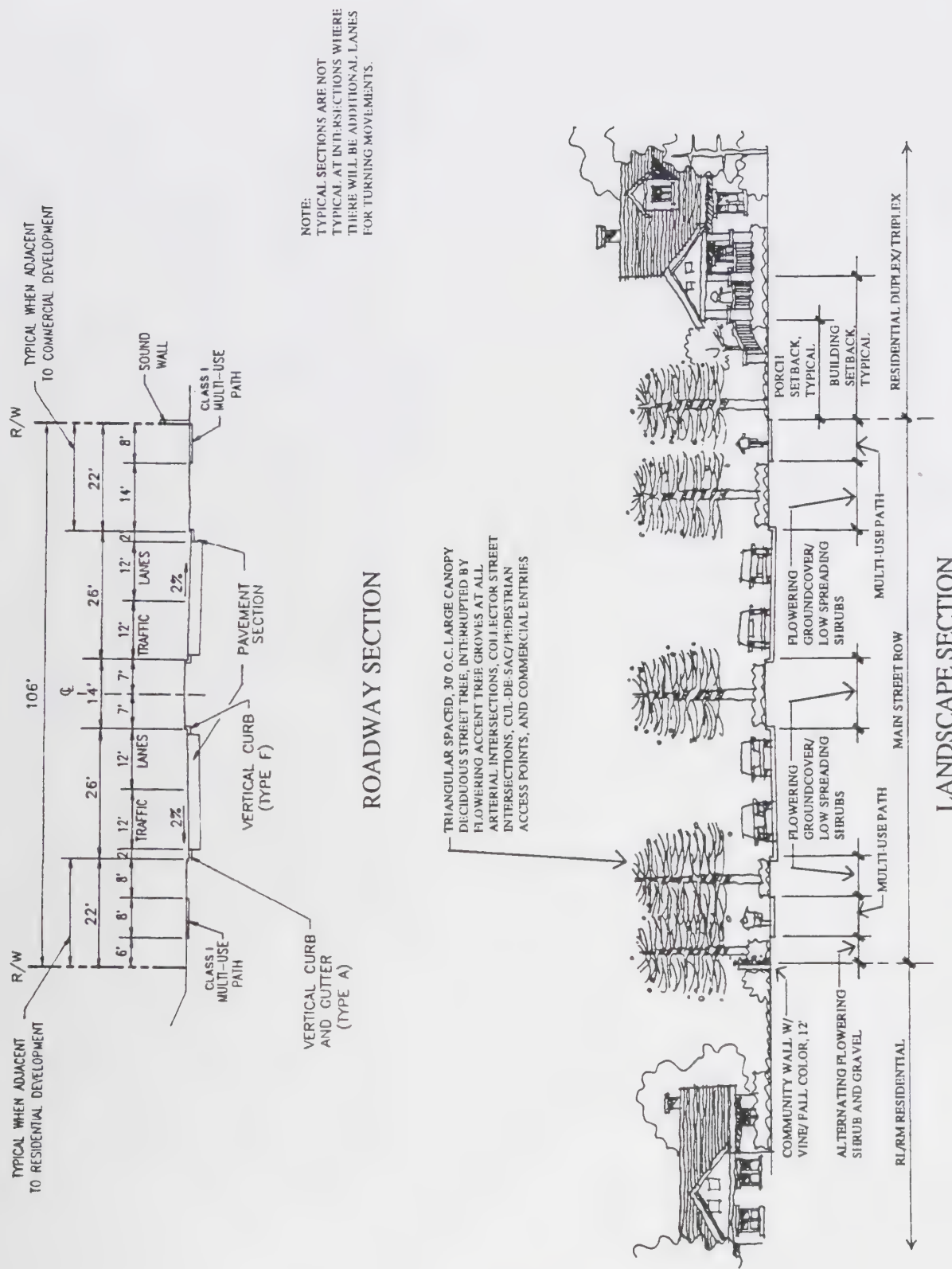
NOTE:
TYPICAL SECTIONS ARE NOT
TYPICAL AT INTERSECTIONS WHERE
THERE WILL BE ADDITIONAL LANES
FOR TURNING MOVEMENTS.

ROADWAY SECTION

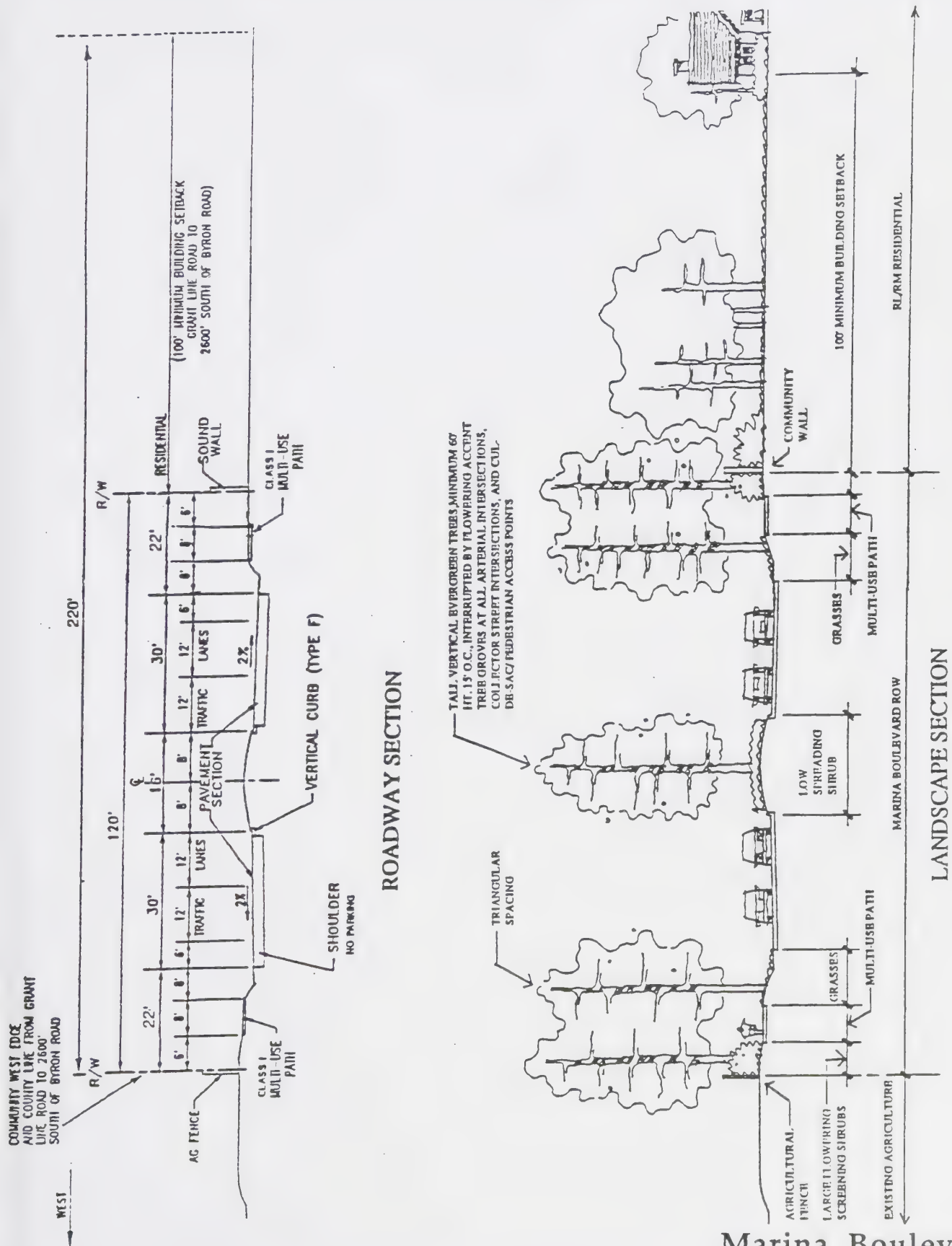


LANDSCAPE SECTION

Main Street (at Village Green) - Minor Arterial



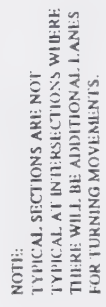
Main Street
(West of Central Parkway) - Minor Arterial

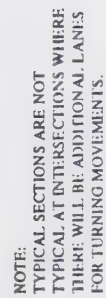


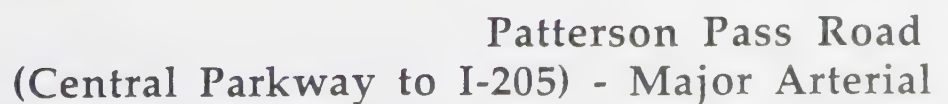
Marina Boulevard
(Adjacent to County Line) - Minor Arterial

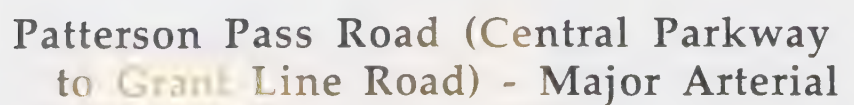
Source: Siegfried Engineering /SWA

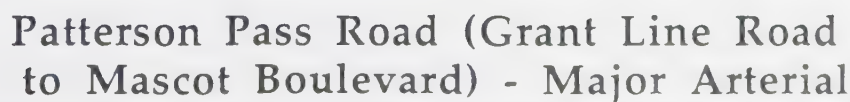


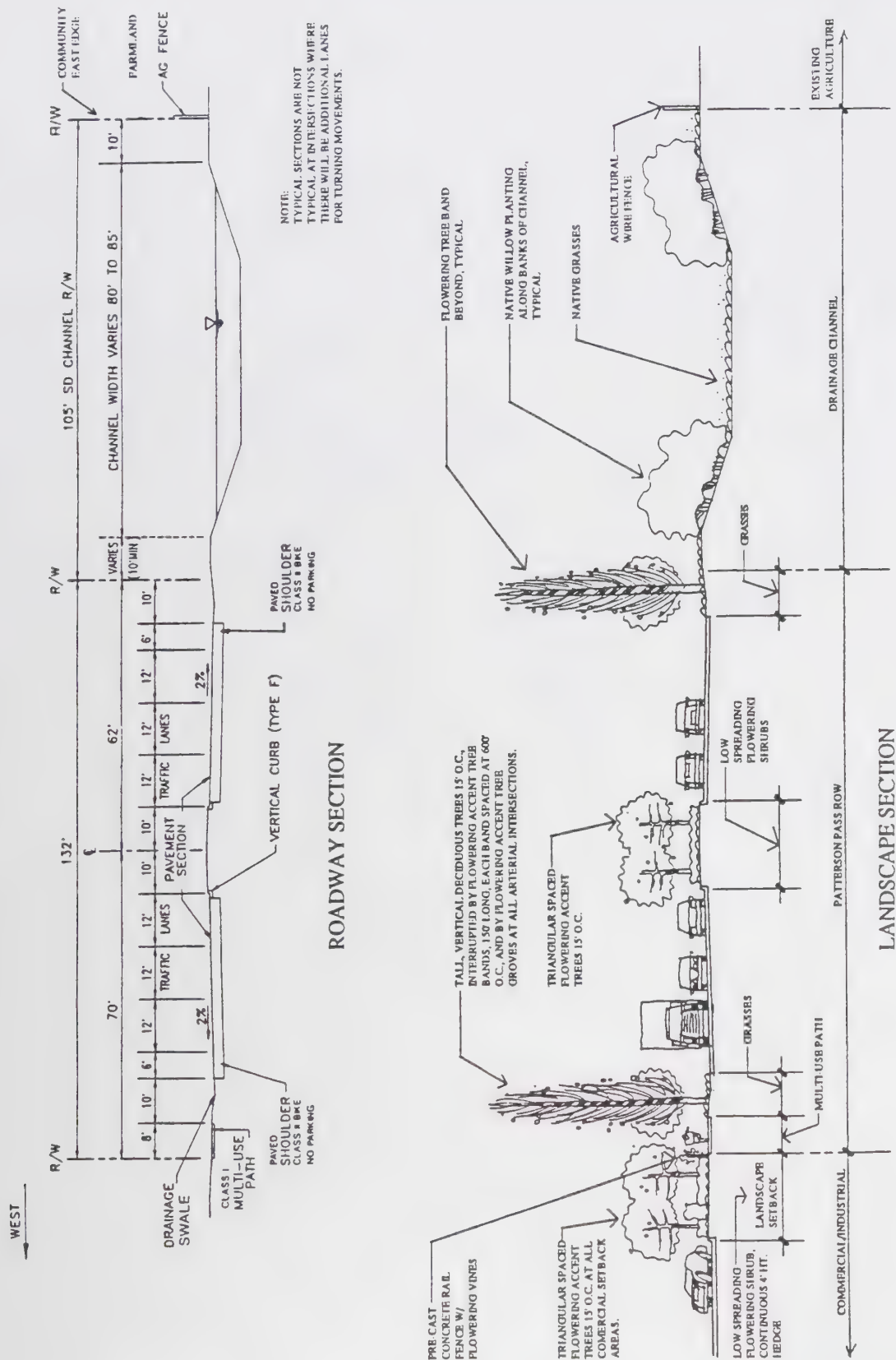












Patterson Pass Road (Mascot Boulevard to Main Street) - Major Arterial

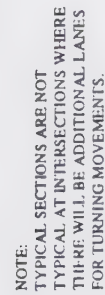
Source: Siegfried Engineering /SWA

September 16, 1994

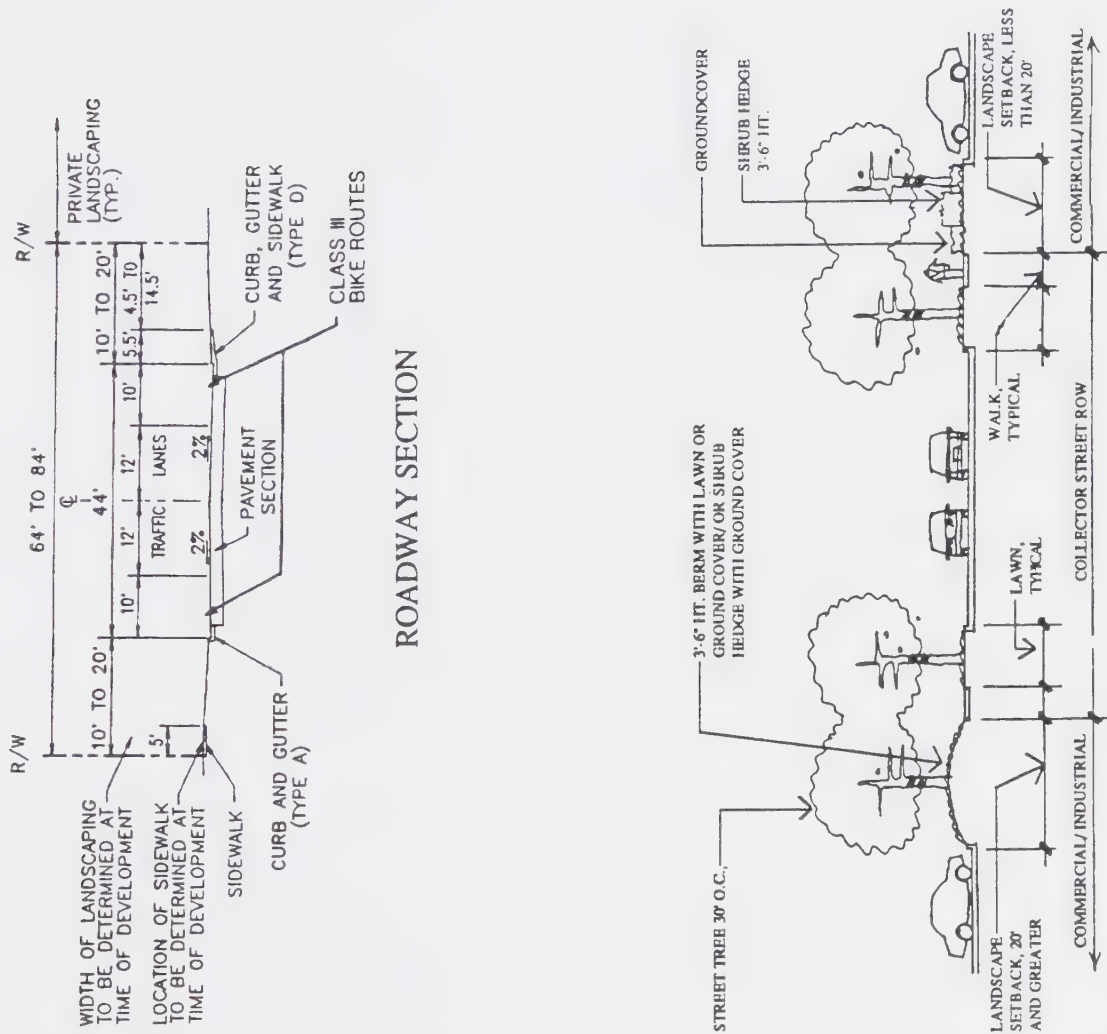
Chapter Nine: Circulation and Transportation

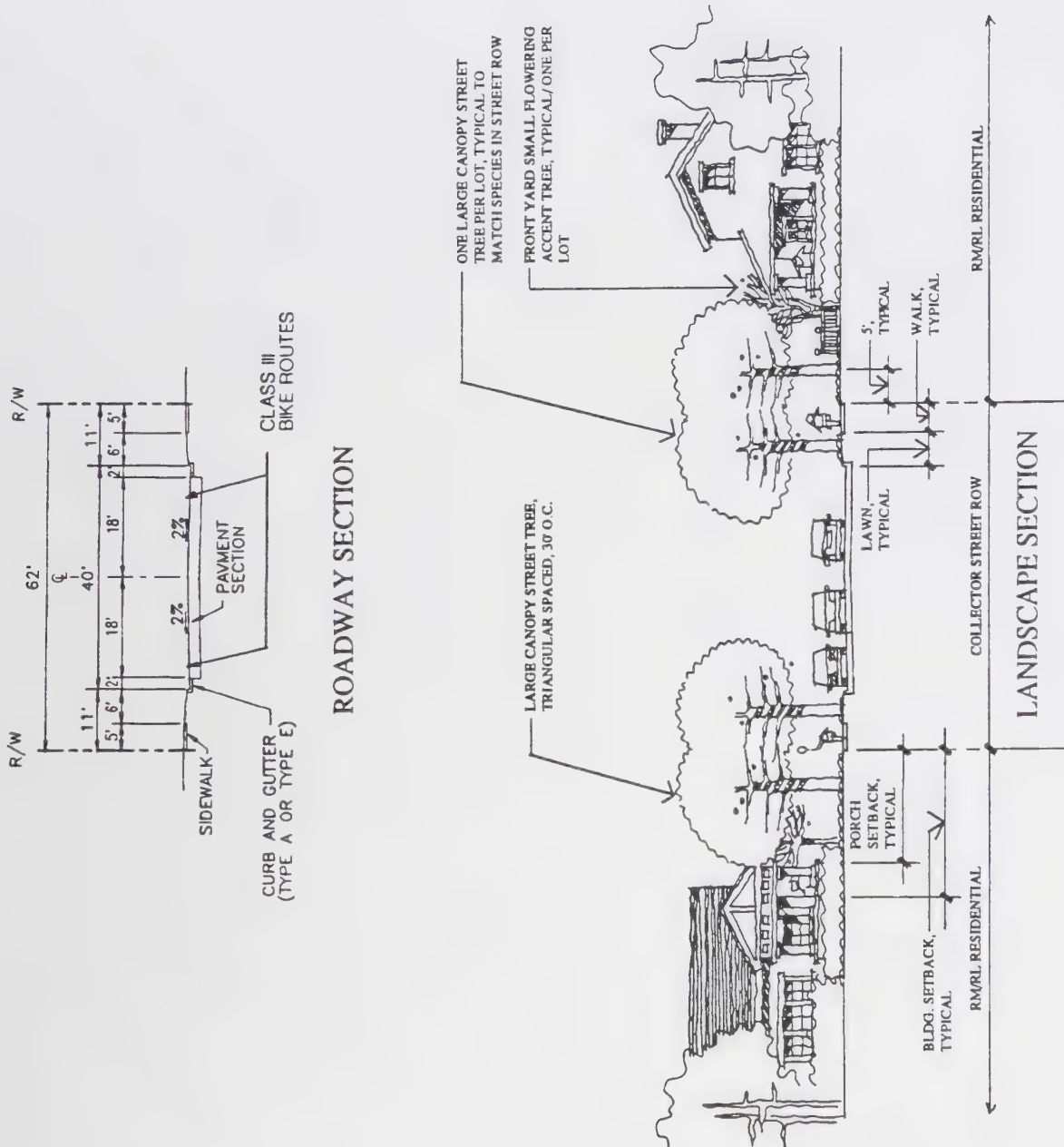


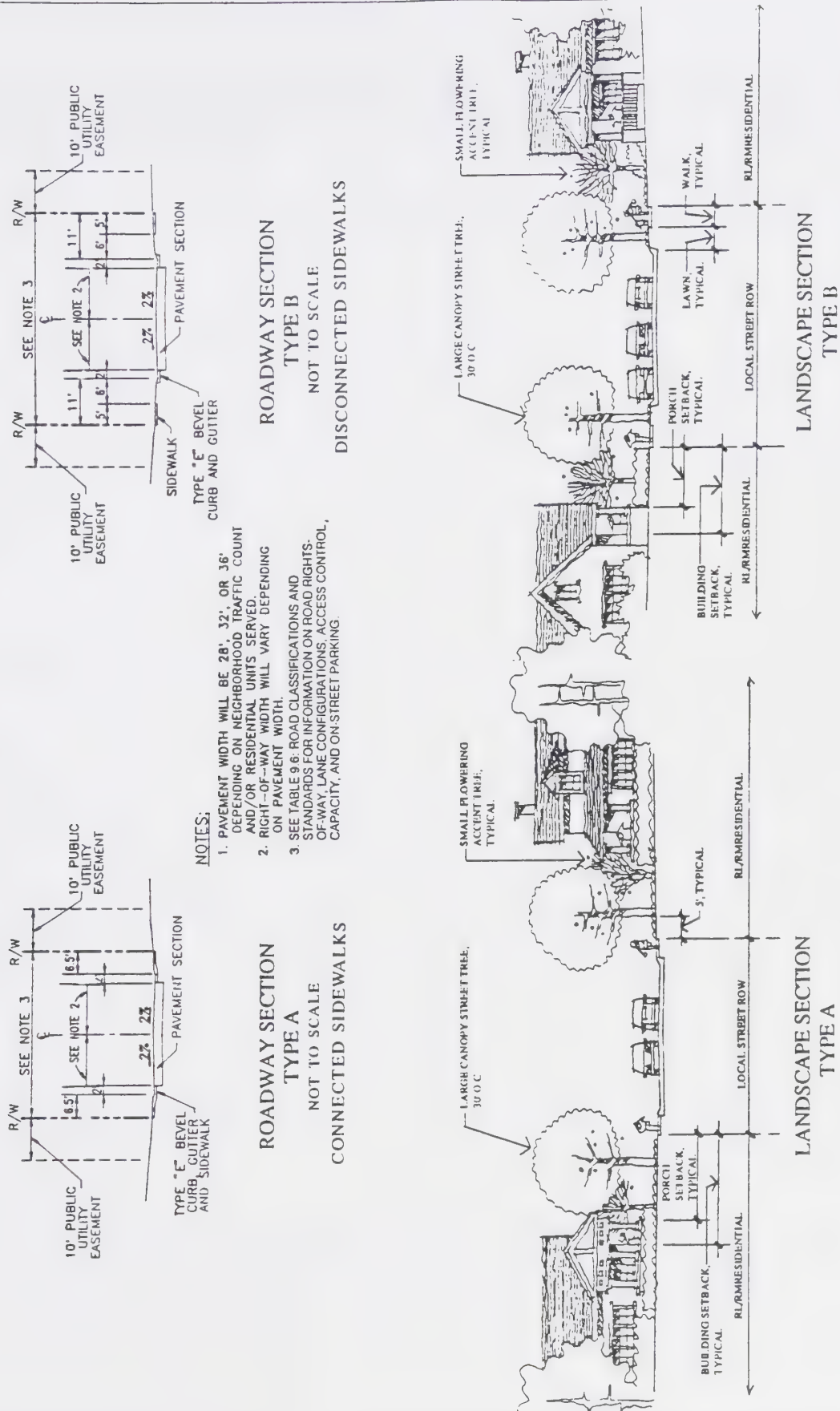
Patterson Pass Road (Main Street to Byron Road) - Major Arterial



Patterson Pass Road (North of Byron Road) - Minor Arterial







9.6 ROADWAY MAINTENANCE

Provisions covering maintenance of community roadways as well as County roadways adjacent to the site are included below to ensure safe vehicular travel within the community and the surrounding area.

Objective: To provide for adequate and cost effective maintenance including routine maintenance, resurfacing, signal maintenance, and landscaping.

Policies:

- a) Roads within the Mountain House community shall be adequately maintained to facilitate safe vehicular travel and according to a pavement management system (PMS) which maximizes pavement life.
- b) Road maintenance shall cover routine maintenance, resurfacing, signal maintenance, and landscaping.
- c) Alleys shall be maintained to acceptable standards for the type of development being served.

9.7 VEHICULAR PARKING

This Master Plan ensures that adequate parking will be provided to accommodate the peak parking demand for the planned land uses with consideration for both on- and off-street parking. By designating parking maximums, use of the single occupant automobile should be discouraged.

Studies of mixed-use developments indicate that combining land uses results in a demand for parking space that is less than the demand generated by separate freestanding developments of similar size and character. For example, an increase in retail parking demand on weekends combined with a decrease in office parking demand on weekends can create an opportunity of shared use of parking. The hourly, daily, and seasonal differences in peak parking demand for the various land uses at Mountain House will make shared parking possible and potentially reduce the total acreage devoted to parking. Transportation demand management strategies, through the reduction in vehicle trips, can also lessen parking demand (see Chapter Ten: Air Quality and Transportation Management). Special permits may allow fewer spaces (i.e., a lower minimum) specifically for office and certain retail (e.g., restaurants, theaters) uses where offset by travel demand management and/or shared parking opportunities.

Another measure to discourage the use of single occupancy vehicles is to reserve premium parking spaces (i.e., closest to building entrances, shaded, etc.) for carpools, compact vehicles, and cleaner fuel vehicles (see Chapter Ten: Air Quality and Transportation Management).

Assumptions:

- a) The off-street parking requirements planned for Mountain House, both the County-specified minimums and the designated maximums, are shown in Table 9.7: Minimum and Maximum Parking Requirements. Current County Development Title standards would be amended to reflect standards for Mountain House.

Table 9.7
Minimum and Maximum Parking Requirements
for Mountain House

Use Types	Spaces Required		Unit of Measurement
	Minimum	Maximum	
RESIDENTIAL USE TYPES			
Family Residential Single Family Multiple Dwelling (incl. two-family, small & large multi-family use types)	2.0 1.5	NA 2.0	per dwelling unit per dwelling unit
Group Living/Care Facilities (incl. farm labor camp, group care, group residential, and shelters use types)	0.25	0.33	per bed
Lodging Services	0.75	1.00	per room
NONRESIDENTIAL USE TYPES			
Office-like Facilities (incl. admin. offices, ag. organizations, high technology industry, professional services, public services: administrative, <u>research and laboratory services</u> , and administrative support services use types)	2.5	4.5	per 1000 sq. ft. of gross floor area
Industrial, Warehousing & Repair Facilities (incl. automotive services, equipment sales and repair, construction services, custom manufacturing, general industrial, truck services, ag. processing, ag. warehousing, explosives handling, laundry services, and wholesaling/distribution use types)	.67	2.5	Per 1000 sq ft of gross floor area
Retail Sales & Services Primary Intermediate and General <u>including liquor sales, off-premises</u>	3.0 3.5	4.5 4.5	per 1000 sq. ft. of gross floor area
Eating/Drinking Establishments Small (incl. eating establishments: convenience; and liquor sales: on premises, limited, use types) Large (incl. eating establishments: full service; and liquor sales: on premises, general, use types)	4.0 8.0	8.0 12.0	per 1000 sq. ft. of gross floor area
Medical Services	4.0	5.0	per 1000 sq. ft. of gross floor area
Group Assembly (incl. community assembly, religious assembly, funeral and interment services: undertaking, and recreation: indoor spectator, use types)	0.25	0.33	per seat
Educational Services Commercial General (elementary & middle schools) General (high school & colleges)	3.0 0.9 0.2	4.0 1.0 0.25	per 1000 gross sq. ft. per employee per student
Public Services Essential (hospitals only) Essential (other)	0.5 4.0	1.0 4.5	per bed per 1000 gross sq. ft.
OTHER USE TYPES (As specified in County Development Title)			

9/8/94

Note: Within the mixed use (M-X) zone, the most recent shared parking guidelines published by the Urban Land Institute may be used as an option to reduce total parking supply.

~~Note: A Parking Adjustment Permit shall be required to reduce or increase the number of parking spaces required for a given use. Adjustments shall only be allowed if a) the County determines that due to the unusual nature of the establishment or development proposed the requirements are insufficient or excessive; or b) a parking demand study justifies the modification.~~

~~Note: Parking Demand Study is a study which takes into consideration such elements as alternative parking arrangements, travel demand management, shared parking opportunities, trade area transportation characteristics, time frame factors, estimates of person trips, etc.~~

Objective: To provide on- and off-street parking facilities in a manner that both meets the parking demand of the planned land uses and encourages the use of alternative modes to the automobile.

Policies:

- ~~a) Within mixed-use districts the shared parking guidelines published by the Urban Land Institute may be used as an option, to reduce total parking supply.~~
- a) On-street parking shall be permitted along Collector roads and local residential and commercial streets, and shall be generally permitted on Minor Arterials and prohibited on Major Arterials except for designated emergency parking.
- b) Access to transit and rail travel shall be facilitated through the provision of adequate park-and-ride facilities at major transit and transfer locations.
- c) An on-street parking policy in commercial areas shall encourage turnover, ensure the availability of parking, and discourage use of parking by employees.
- d) Park-and-ride lots shall be provided at transit locations as described in Section 9.9: Transit.
- e) Parking for carpools and cleaner fuels vehicles shall be located in the preferred parking spaces, such as in shaded, convenient locations close to building entrances. In order to facilitate disembarking and embarking of passengers with respect to rideshare vehicles, passenger loading/unloading areas shall be required at or near building entrances.
- f) Compact spaces shall be included throughout the project's parking areas through allocation of designated compact spaces to comprise up to 40% of total parking spaces. Alternatively, standard parking stall dimensions may be reduced to 8.5 by 18 feet for all parking spaces to serve both full-sized and compact cars.
- g) On street parking shall be accommodated within a seven-foot wide parking lane, which includes up to two feet of gutter pan (see Typical Road sections).
- h) Parking areas for industrial and office uses shall be located at the sides and rear of buildings, to the degree possible.
- i) Areas for receiving and loading of materials on the premises of commercial and industrial uses shall be located away from the public street to which the use is oriented. Loading areas shall be screened from all public streets and public view to the greatest extent possible.
- j) For all industrial and commercial uses except mixed-use, a landscape strip shall be installed between parking areas and adjacent public street rights of way. ~~(see Table 4.1: Lot and Structure Standards).~~

Implementation:

- a) Parking Management Plan. ~~Prior to submittal of the first Development Permit,~~ A parking management program shall be developed for on- and off-street parking in commercial areas which limits or controls long term (e.g. more than two or four hours) parking. The enforcement of the parking management program shall be designed to assist in turnover and parking availability. The plan shall be prepared as part of the TDM Plan.
- b) Specific Plan Requirements. If an individual Specific Plan includes land uses with large parking concentrations such as the Town Center and the multi modal transit station, that might benefit from a structured parking plan, then the Specific Plan shall contain a generalized assessment of parking demand based upon the averages of the parking requirements for various land use designations included in the plan. This assessment shall contain TDM measures. The opportunity for shared parking shall be evaluated based upon the types of uses anticipated within a given zone and general estimates for required parking. At the building permit stage, precise parking requirements shall be determined based on the standards listed in Table 9.7: Minimum and Maximum Parking Requirements.
- c) Design Manual. The Design Manual shall provide design guidelines for the layout of parking lots, prior to the submittal of the first Development Permit.

9.8 BICYCLE AND PEDESTRIAN FACILITIES**9.8.1 Bicycle Facilities**

Bicycling is intended to serve as a means of recreation and as a form of transportation suitable for short "utility" trips for employment, school, shopping, and social purposes. The integrated land use and circulation plan permits bicycling to comprise one link in a transit-based trip to both on-site and regional destinations. Provision of ample cyclist amenities, addressing safety, security, and aesthetic concerns, will serve as an incentive to reduce use of the private auto for short trips.

The generic term "bikeway" may be further defined as Class I paths, Class II lanes, and Class III routes. Class I paths are separate from the vehicular network, providing the greatest degree of physical safety for the cyclist. Class II lanes are separate, marked lanes within the roadway, with guide signs and pavement markings along the way. Class III routes are signed only, with the cyclist sharing right-of-way with motorists.

Objective: To provide ample bicycling, rollerblade, and electric cart amenities within the community to serve as an incentive for reducing use of the private automobile for short utility and commute trips, to encourage and enhance recreational bicycle travel and to separate high speed commuter bicyclists from recreational use whenever practical.

Policies:

- a) Class I and II bikeways shall provide a continuous, comprehensive network minimizing the need for cyclists to share roadway space with motorists.
- b) The bicycle network shall provide adequate facilities to separate the slowly moving family-oriented bicyclists from the faster commuter bikers.
- c) Class III bikeways shall be provided along Collector streets to guide bicyclists through neighborhoods. These should only be used for short distances to connect to major routes.

- d) The bikeway system shall be coordinated with regional bikeways.
- e) Mountain House shall work with the City of Tracy to develop and implement a direct bicycle route between the two communities.
- f) All bike paths, routes, and lanes shall be designed to conform with standards established by the community and in compliance with Caltrans guidelines.
- g) Rest areas, bike racks, drinking fountains, and other appropriate amenities shall be provided at significant destinations on the network of Class I and Class II facilities.
- h) A "fair share" participation towards bicycle routes to regional destinations shall be provided whenever off-site roadway improvements are undertaken on designated regional bike routes, over the length of the improved sections. Participation shall be required when regional improvements in the area are initiated and the degree of participation shall be established by benefit district study.
- i) Rollerblade and electric cart use of bikeways and multi-use paths routes shall be allowed whenever pedestrian and bicycle use is not compromised. Additional width and other design considerations may be required to accommodate the size and speed of electric carts.

Implementation:

- a) Bikeway System. Multi-purpose Class I paths, Class II bike lanes, and Class III bike routes shall be provided as shown on Figure 9.30: Bicycle and Pedestrian Network and Figure 9.31: Bicycle and Pedestrian Walk and Path Standards, and as described below.
- b) Class I Bike/Multi-Use Path. The following Class I Bike Paths shall be constructed at the same time as adjacent roads. Class I Bike Paths shall parallel major Arterials except within Mountain House Creek Community Park and Old River Linear Park, where multi-use paths shall be constructed as specified in the Parks and Open Space Plan. All multi-purpose Class I paths shall have curb ramps and crosswalk stripping when crossing streets.
 - Mascot Boulevard
 - Kelso Road
 - Central Parkway
 - De Anza Boulevard
 - Patterson Pass Road
 - Main Street (Patterson Pass to De Anza Boulevard and Marina Boulevard to Central Parkway)
 - Grant Line Road
 - Mountain House Boulevard
 - Marina Boulevard (Old River to Grant Line Road)
 - Mountain House Creek Community Park (Marina Boulevard to Old River)
 - Old River Regional Park

- c) Class II Bike Lanes. The following roadways shall be designed to include six-foot paved shoulders with signing, pavement legends, and lane striping separating the shoulders from automobile traffic so that Class II bike lanes are constructed concurrent with the roadway.
 - Marina Boulevard
 - Grant Line Road (Marina Boulevard to Patterson Pass Road)
 - Central Parkway (Patterson Pass Road to North Patterson Pass Road)
 - Patterson Pass Road (I-205 to Byron Road)
 - Byron Road
 - Mascot Drive
- d) Class III Bike Routes. Class III bike routes will be provided concurrent with construction of roadways to ensure a continuous, safe bicycle network. All Collectors shall be designated as Class III routes.
- e) Bikeway Development. All bikeways shall be part of the roadway development/design when they are within the road right of way.
- f) Commuter Travel. A subset of the Class I and II bikeways shall be designated as "commuter" routes indicating the most efficient path of travel for the dedicated bike commuter. This subset of bikeways shall include directional signage, direct access routes, and secure bike storage facilities at all park-and-ride lots and transit centers which shall be included in the roadway design.
- g) Traffic Signalization. Where designated bicycle facilities intersect signalized roadways, ~~traffic signal locations~~, the ~~ose~~ traffic signals shall include the latest technology for bicycle actuation, or if such technology does not exist, pedestrian equipment to allow cyclist actuation.
- h) Bicycle Facilities and Parking. The improvement plan for each industrial and commercial site shall provide secured bicycle facilities free-of-charge to all employees. These facilities shall include Class I lockers or Class II racks as appropriate. Bicycle storage for commercial, industrial, office, and public uses shall be provided at a rate of five spaces per building complex plus one space for every 15 automobile parking spaces. Office buildings or office complexes that are 50,000 net rentable square feet or larger shall include shower and locker facilities as an incentive for employees and visitors to walk, jog, or bicycle.
- i) Racks on Transit Vehicles. Transit vehicles shall include bicycle racks to encourage bicycle access to the system.
- j) Determination of Fair Share. The community shall participate on a fair share basis in the planning and implementation of off-site bicycle facilities connecting with regional bike routes as designated on the County Regional Bicycle Plan, including routes along Patterson Pass Road, Byron Road, Grant Line Road, Schulte Road, and Edmund G. Brown Aqueduct.
- ~~j) Determination of Fair Share. "Fair share" contribution toward improvement of regional bicycle facilities shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the design stages of the individual improvements.~~

- k) Specific Plan Requirements. At each Specific Plan stage the bikeway system shall be reviewed and updated to ensure conformance with goals and current conditions, and to ensure consistency with bikeways adjacent to the site. Each Specific Plan shall designate the locations of bicycle and pedestrian facilities.

9.8.2 Pedestrian Facilities

Mountain House is intended to offer a network of pedestrian walkways, paths, and trails that facilitates walking for short trips, for purposes such as shopping or social visits, as well as walking for pleasure. The design of the pedestrian circulation system helps to minimize pedestrian/vehicular conflicts and also facilitates pedestrian access to transit.

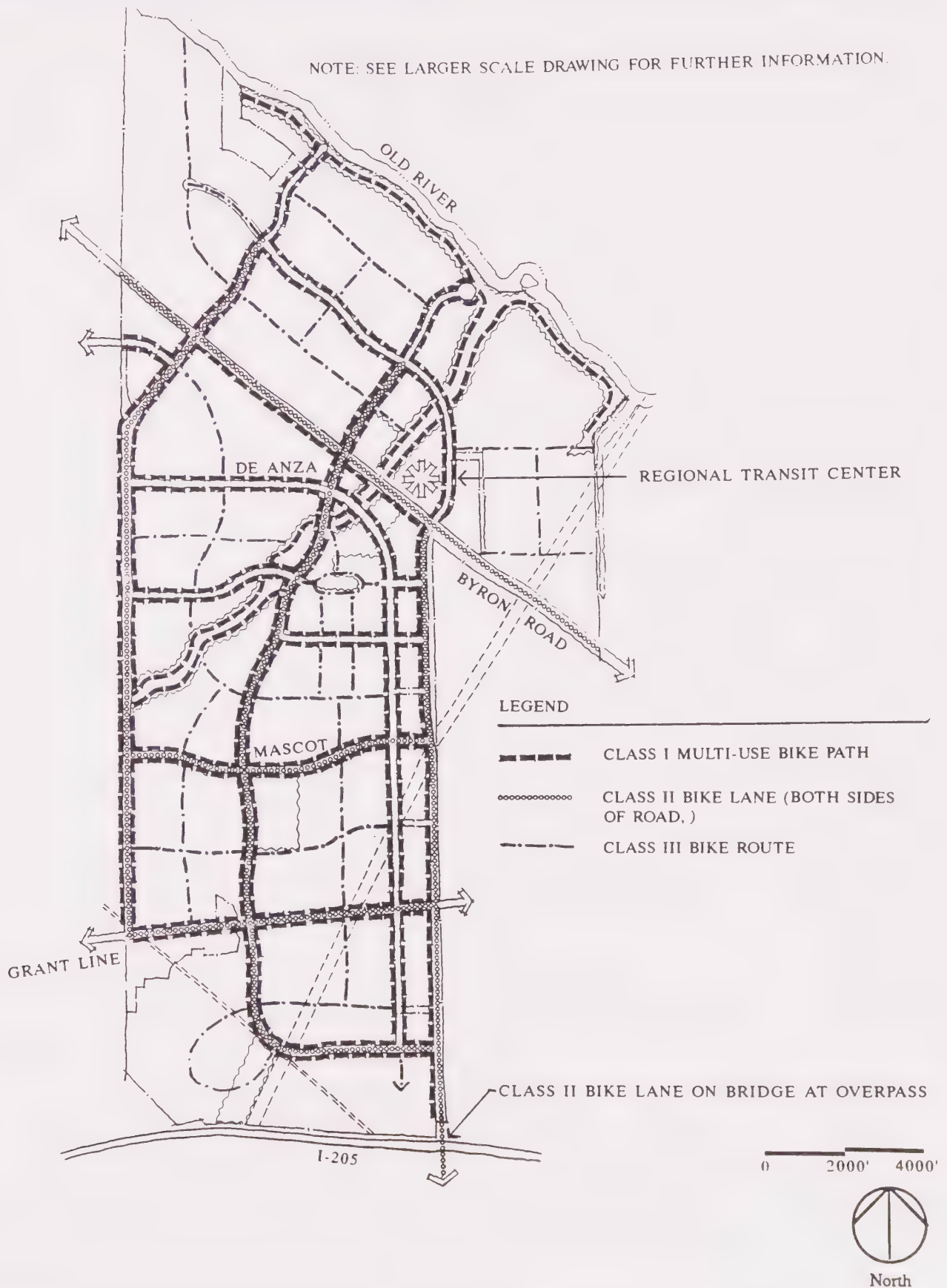
Objective: To encourage and enhance pedestrian travel through provision of a complete network of walking paths and sidewalks.

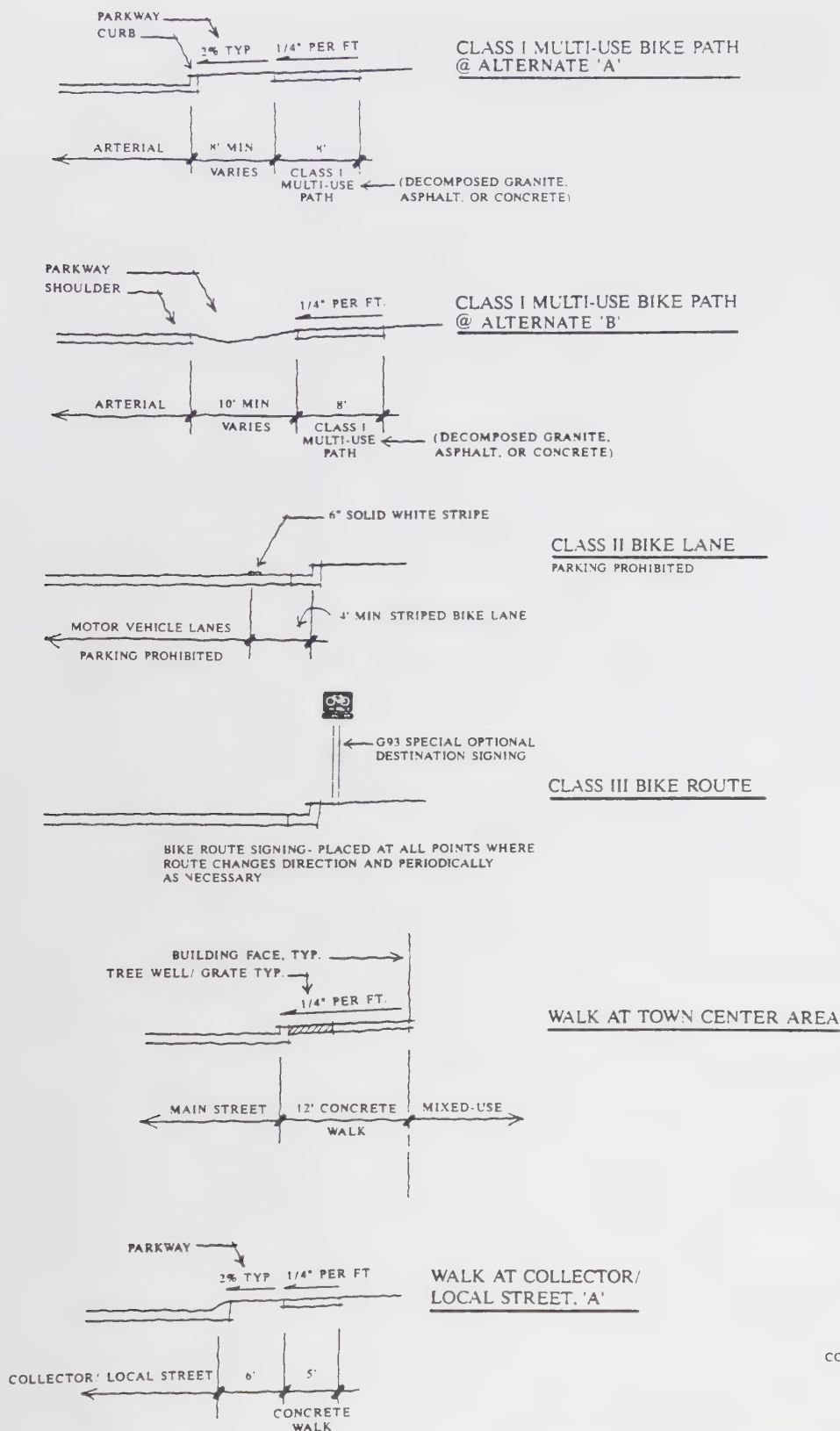
Policies:

- a) In addition to the multi-use paths, additional pedestrian facilities shall be provided along roadways, within parks, and at higher intensity areas such as the Town Center. Pedestrian facilities shall include sidewalks, pedestrian crossings, benches, lighting, trash containers, and signage.
- b) The design of the multi-use paths described above shall facilitate safe pedestrian travel in addition to bike travel.

Implementation:

- a) Standards for Multi-use Paths. Multi-use paths shall be at least eight feet in width, except for the Old River Park multi-use path which shall be at least 12 feet wide (see Section 7.2.7: Pedestrian Paths), and may be constructed of decomposed granite, asphalt or concrete as appropriate to use and location. Collector and local streets shall incorporate walks, five feet in width (see Figure 9.31: Pedestrian Walk and Path Standards). Walks' and paths' relationships to streets are shown in street sections, Figures 9.4 to 9.29. Multi-purpose path routes are shown in Figure 9.30 under the Class I bike routes.
- b) Commercial/Industrial Collector Streets. Commercial and industrial Collector streets shall have walks or paths on at least one side of the street, and on both sides where the street supports commercial frontage.
- c) Residential Streets. Residential Collector and Local streets shall have a walk on each side of the street.
- d) Pedestrian Crossings. At each signalized intersection where pedestrians are expected to cross, a pedestrian crossing signal shall be provided.
- e) Pedestrian Features. The design of each commercial area and the Town Center shall include pedestrian-oriented features, such as narrowed intersections to reduce crosswalk distance, small-radius corners, and pedestrian-actuated signals. Site plans prepared as part of Development Permit applications shall incorporate direct and convenient pedestrian connections, including those between sidewalks and building entrances and between cul de sacs and abutting streets.





- f) Specific Plan Requirements. Each Specific Plan shall designate the locations of bicycle and pedestrian facilities.
- ~~f) Transit Centers. A design for each neighborhood transit center shall be included in the Special Purpose Plan for the affected Neighborhood Center. A design for the intermodal station on the Mococo line shall be prepared prior to the submittal of the first Development Permit within the affected Specific Plan Area. Each transit center shall permit direct pedestrian access from the closest Arterial streets, without introducing long, circuitous access routes.~~

9.9 TRANSIT

The following section addresses transit modes including bus and rail. Chapter Ten: Air Quality and Transportation Management contains additional provisions for related facilities such as transfer stations and rideshare.

9.9.1 Bus Transit

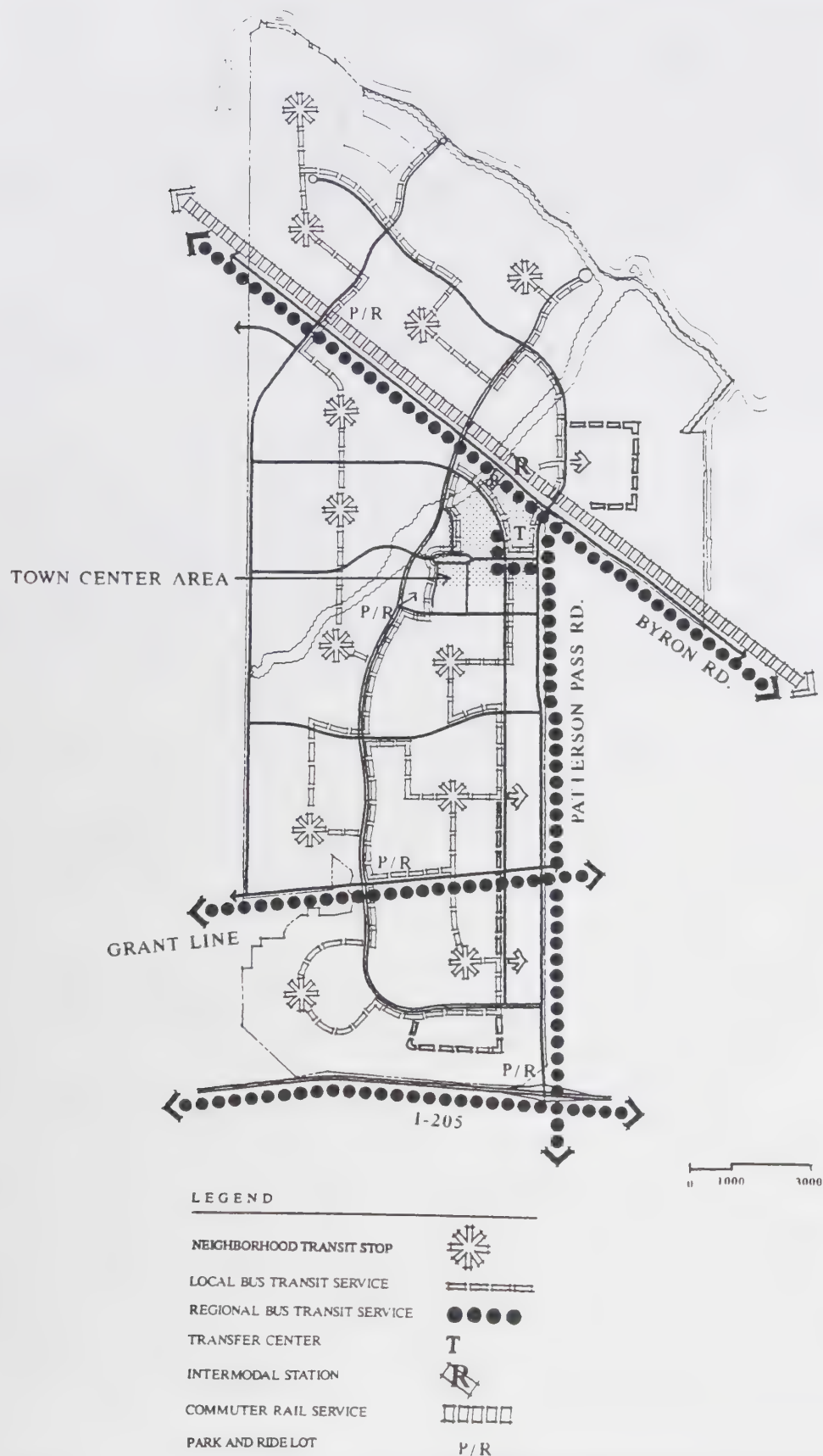
This section addresses local, County, and regional transit bus service. Local service will be operated between the 12 residential neighborhoods, with each neighborhood center serving as a focal point for passenger collection and distribution. These buses will also serve the commercial retail and employment centers within the project. Transfers to regional bus routes will take place at ~~major transfer points within the community centers~~, the Town Center and at the primary Mococo Line intermodal center. Regional service will provide access to major regional destinations, such as Tracy, Stockton, Patterson Pass Industrial Park, and Lawrence Livermore Laboratories.

The sale of new residential units within the community will be an indicator of transit need. Residential sales will be monitored by the community for other purposes.

Objectives: To reduce reliance upon the private automobile by offering attractive, competitive bus transit service locally within the community and to major regional destinations.

Policies:

- a) Local transit service shall be provided between the twelve residential neighborhoods and the commercial, retail, and employment uses within the project at a service frequency that provides a viable alternative to the automobile for local peak and off-peak travel.
- b) Transit service provided within the community and to regional destinations shall be consistent with the San Joaquin County Congestion Management Plan.
- c) Commensurate with the number of occupied dwelling units specified in the CMP and employee base, regional transit service shall be provided between the Mountain House community and Tracy, Stockton, Lawrence Livermore Laboratories, and the BART East Dublin/Pleasanton station (open by 1997) at a service frequency that provides a realistic alternative to the automobile for peak-hour travel between the community and these regional destinations. This service shall facilitate the transfer of passengers to other transit services in the region serving these destinations (see Figure 9.32: Transit Routes and Facilities Plan).



Source: Korve Engineering

Transit Routes and Facilities Plan

September 16, 1994

Chapter Nine: Circulation and Transportation

- d) The twelve neighborhood centers shall serve as the local focal points for passenger collection and distribution. Transfers between local and regional bus service shall be accommodated at the Town Center (interim transfer facility). major transfer points among the neighborhood centers and the Town Center.
- e) The Town Center shall include a central transfer facility to serve as the intermodal transfer center prior to completion of the Mococo Station.
- f) Transit service amenities to promote use of bus service shall be located throughout the community to enhance service accessibility. Such amenities shall include bike racks, bike lockers, shelters, telephones, safety stop areas, etc.
- g) Neighborhood impacts shall be minimized and service attractiveness enhanced through the use of smaller, clean-fuel vans for local transit service.
- h) Local transit routes shall be designed to provide stops within one-quarter mile of the majority of residential, retail, and employment. Pull-outs and bus shelters shall be provided at all major stops on local bus routes. Bus schedules shall be posted at all stops and route maps shall be displayed at all major stops.
- i) The community shall participate in the implementation of bus transit facilities on a "fair share" basis.
- j) Each transit center shall permit direct pedestrian access from the closest Arterial streets, without introducing long, circuitous access streets.

Implementation:

- a) Initiation of Regional Transit Service. Upon sale of the 25th dwelling unit, transit service between the existing neighborhood and regional transit connections in Tracy and major employment destinations shall be offered on a demand-responsive basis.
- b) Expansion of Regional Service. Prior to the sale of approximately 4,100 dwelling units, the demand-responsive service provided between the community and Tracy shall be expanded to a regional fixed route transit service connecting the major transfer points among existing neighborhood centers with Tracy, Stockton, Lawrence Livermore Laboratories, and the BART East Dublin/Pleasanton station (when open). Service shall be offered using lift-equipped buses.
- c) Initiation of Local Service. Upon sale of 700 dwelling units, local transit service shall be offered on a demand-responsive basis and/or fixed route between the existing neighborhood centers and existing employment and retail areas within the community.
- d) Expansion of Local Service. Prior to the sale of 8,200 dwelling units, local and regional transit service shall be expanded to provide more frequent service.
- e) Funding. As new major regional destinations may emerge and travel demand warrants, regional transit service between the community and these new destinations, consistent with the service levels defined above, shall be funded by the community on a "fair share" basis in cooperation with major regional employers and the Regional County transit agency. "Fair share" contribution toward improvement of bus transit facilities shall be determined in the Public

~~Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the funding stages of the individual improvements.~~

- f) Coordination of Service. Provision of regional transit service shall be coordinated by the community and the regional transit agency to promote creation of a coordinated county-wide service plan and to determine the most effective means of administration.
- g) Neighborhood Center Transit Stops Centers. ~~Each Special Purpose Plan for a Neighborhood Center shall provide for a Specific Plan shall include provisions for a neighborhood transit center. A neighborhood transit center shall be constructed within each neighborhood in conjunction with the neighborhood park which shall provide the following amenities: lighted bus shelter, bench, telephone, waste receptacle, bicycle racks, and bike lockers (see Figure 9.32).~~
- h) Town Center. The Town Center Specific Plan shall incorporate a central transfer facility. This facility shall provide the following amenities: bus parking, park-and-ride lot, bicycle lockers, sheltered passenger waiting area, rest rooms, ticket booths, and comprehensive map and schedule information.
- i) Racks in Transit Vehicles. See Bicycle Facilities.
- j) Village Center. Each Village Center shall include a Park-and-Ride lot and bicycle storage facilities.

9.9.2 Rail Transit

The Mountain House community is well located to take advantage of rail passenger transit opportunities now emerging in San Joaquin County and the surrounding region. The site is transected by the Southern Pacific's (SP) "Mococo" branch line, which runs from Tracy to Martinez. A SP proposal to operate passenger rail service on the Mococo line between Brentwood and Martinez is under study by Contra Costa County. There is a likelihood that this service will be implemented some time in the next ten years, when demand in the area warrants. It is also possible that the service could be extended beyond Brentwood to Mountain House and Tracy.

In addition, the community lies only four miles north of the Union Pacific line and SP right-of-way which connects the Central Valley to the San Francisco Bay Area via the Altamont Pass. San Joaquin County is programmed to operate passenger services on the Union Pacific Altamont line for a two-year period, beginning in 1996. Service on the Altamont line could provide direct connections to BART and the Caltrain Peninsula service in the Bay Area, and ultimately to high speed rail service serving the San Joaquin Valley and the entire state. Mountain House residents would be able to board shuttle bus service for a short trip on Patterson Pass Road to a transfer station on the UP or SP line south of the project site.

Objective: To actively support and participate in obtaining passenger rail transportation between Mountain House and nearby rail stations; and regional destinations.

Policies:

- a) Passenger rail service on the Altamont and Mococo lines and shall be promoted.
- b) Access between Mountain House and the new Altamont and Mococo rail stations shall be provided.
- c) Development along the Mococo Line should be located in light of the fact that this line will carry passenger traffic at some point in the future and thus frequency and speed of trains will rise over current use. The impact of rail service on any development within the community adjacent to the Mococo line shall be minimized.
- d) The community shall participate in the implementation of the rail transit facilities, including but not limited to those identified in this Master Plan, on a "fair share" basis. (See Table 9.1 and Figure 9.1.)

Implementation:

- a) Altamont Pass Service. Upon implementation of passenger service over the Altamont Pass on either the SP or UP lines, bus and /or shuttle service shall be provided between the Town Center (or another central transfer location if the Town Center has not yet been built) and the nearest station at a service frequency consistent with the passenger rail service schedule.
- b) Facilities on Mococo Line. Upon implementation of passenger service on the Mococo line through the community, a passenger platform, and multi-modal station or other facility commensurate with passenger boarding demand, shall be developed on the Mococo line north of Byron Road and west of Patterson Pass Road to serve the Mountain House community (see Figure 9.1: Freeway and Rail Regional Transportation Improvements). A design for the intermodal station on the Mococo Line shall be prepared prior to the first Development Permit within the affected Specific Plan area.
- c) Altamont Station Contribution. A proportionate "fair share" contribution, based upon projected ridership shall be made towards development of a new Altamont platform near I-580 at the time that service is implemented and at least 4,100 dwelling units have been occupied. (see Figure 9.1: Freeway and Rail Regional Transportation Improvements). "Fair share" contribution toward improvement of these facilities shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the funding stages of the individual improvements.
- d) Mococo Station and Service. Upon implementation of passenger service and completion of the Mococo Station facility, the station shall be incorporated into existing local transit routes at a service frequency consistent with the passenger rail service schedule on the Mococo line. Existing feeder service between the Town Center and other stations on the Mococo line shall be discontinued at this time. This station shall serve as the designated intermodal transfer facility which shall provide a hub for passenger activity and shall provide comprehensive information regarding access to alternative modes, access for the disabled, and route maps and

schedules for community and regional transit operators (BART, AC Transit, SMART, Contra Costa County Transit Agency, and AMTRAK).

- e) Development Proposals. All residential development proposals for the area adjacent to the Mococo line shall be reviewed to ensure the issues of noise and vibration have been addressed. A building setback sufficient to provide a safety and aesthetic buffer to adjacent uses shall be established along the Mococo line. This setback shall be described in the Specific Plan for the applicable area.

9.9.3 Rail Crossings

There are currently three at-grade roadway crossings of the SP line proximate to the site, at Kelso Road, Henderson Road, and Wicklund Road. All of these roads presently carry very low traffic volumes, serving a limited number of residences north of Byron Road. At buildout, the Master Plan calls for improvement of the existing crossings at Kelso and Henderson Roads, and closure of the crossing at Wicklund Road. In addition, extension of Patterson Pass Road north of Byron Road will require a new at-grade crossing. A new grade-separated overcrossing of both Byron Road and the SP line is also required by the Master Plan, to be constructed roughly one-half mile northwest of the Patterson Pass Road crossing.

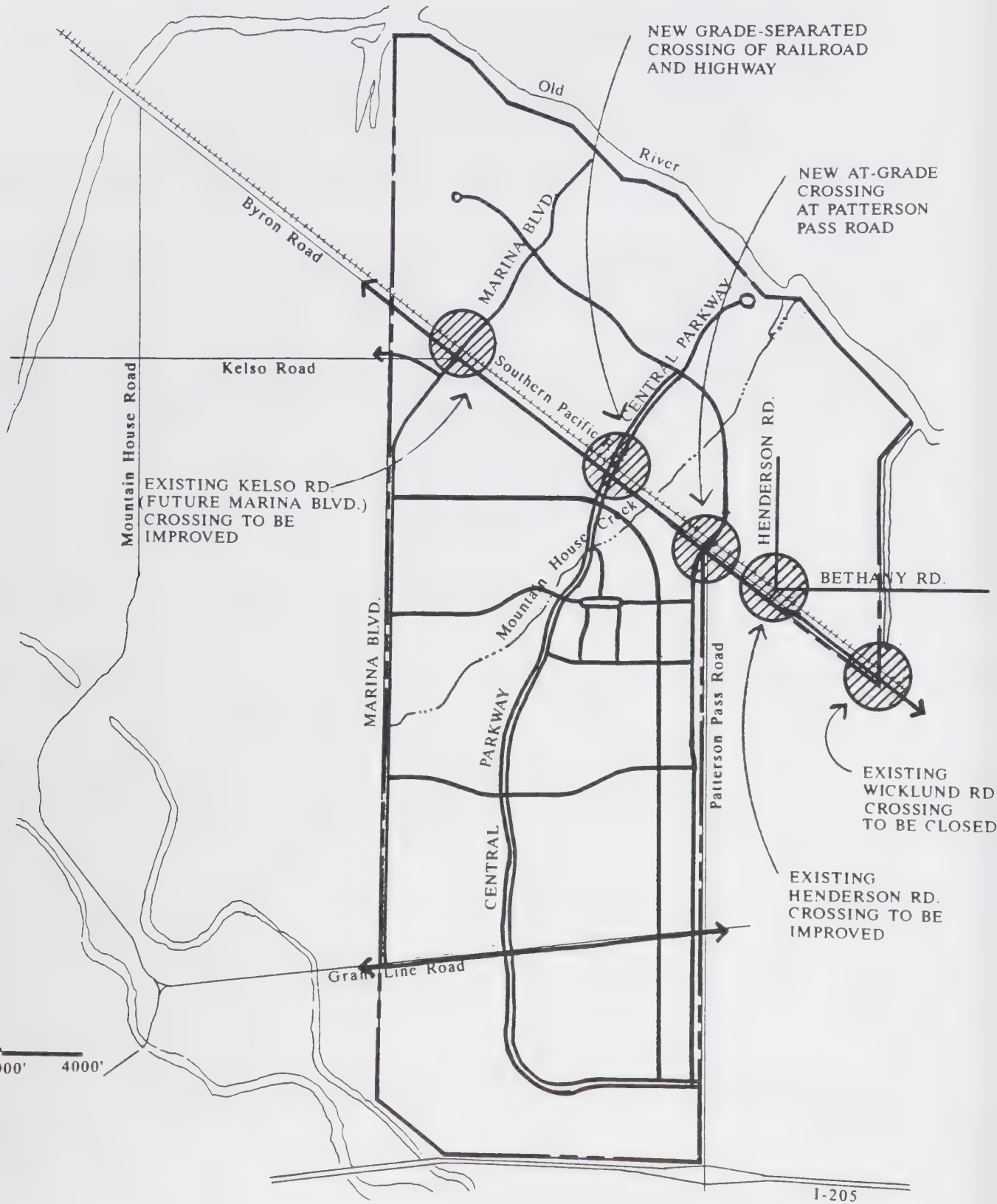
Objective: To ensure that roadway crossings of the Mococo line accommodate the circulation needs of the community and facilitate safe passage for motorists, pedestrians, and bicyclists.

Policies:

- a) Rail crossings shall be provided as defined in Figure 9.33: Railroad Crossing Concept.
- b) All at-grade rail crossings shall include a pull-out lane for specially designated vehicles which are required to stop at crossings.
- c) All at-grade rail crossings shall include crossing gates, flashing lights and available signals.
- d) All road and trail crossings of the Mococo line shall provide adequate pedestrian and bicycle facilities.
- e) Access to the Mococo line right-of-way by pedestrians shall be limited to minimize safety hazards.
- f) The Central Parkway rail over-crossing of the Mococo line shall accommodate travel by school children and others between the northern and southern portions of the site and shall incorporate sidewalks and bicycle lanes.
- g) To ensure that access to the community is not accidentally obstructed by a train-related incident, at least two at-grade crossings of the rail line shall be maintained to serve the area north of Byron Road.

Implementation:

- a) PUC Standards. Any proposed new vehicular, pedestrian or bicycle railroad crossing or change to an existing crossing shall be approved by the California Public Utilities Commission and its standards for traffic control, lighting, signage, and other warning devices.
- b) Wicklund Road Crossing. Upon completion of the new at-grade rail crossing at Patterson Pass/Byron Road, the existing at-grade crossing at Wicklund Road shall be closed.
- c) Henderson Road Crossing. Prior to commencement of commercial or industrial building construction in the North Industrial Area, the existing at-grade crossing at Henderson Road shall be improved to include crossing gates, flashing lights, and audible signals.
- d) Rail Crossings. The first residential Specific Plan north of Byron Road shall provide at least two rail crossings to serve the area north of Byron Road. One of these crossings shall be the grade-separated crossing at Central Parkway. The location of the at-grade crossing shall be determined by the location of initial residential development north of Byron Road.
- e) Bike/Pedestrian Facilities. Sidewalks and Class II bike lanes shall be provided on all roadways crossing the SP tracks.
- f) Creek Multi-Use Path. The Mountain House Creek multi-use path shall be grade separated where it crosses the SP tracks (see Chapter Seven: Recreation and Open Space for discussion of multi-use path).
- g) Fencing. Upon development north of Byron Road, fences or other obstacles shall be constructed along the SP right-of-way boundary to prohibit pedestrian access across the right-of-way except at designated crossings.
- h) Coordination with SP. Prior to submitting plans to the California Public Utilities Commission for the review and approval of proposed alterations to rail crossings, the proposed changes shall be discussed with the Southern Pacific Transportation Company and obtain their accord.



Source: Siegfried Engineering Inc.

Railroad Crossing Concept

September 16, 1994

Chapter Nine: Circulation and Transportation

9.10 PHASING AND COSTS

9.10.1 Capital Facility Cost and Phasing

As described in the Public Financing Plan, fees levied and collected by the CSD or the County will fund three separate improvement programs: 1) community transportation, 2) County transportation, and 3) regional transportation, including freeway improvements and transit. These three funds will be maintained separately and will not be intermingled. ~~Fee revenues will be pooled and used to fund the highest priority regional improvements for which the project has a clearly defined fair share obligation.~~ Each fund will be used to pay the project's fair share portion of identified improvements in each category, as those improvements become necessary.

The Mountain House fair share backbone transportation and circulation improvement costs are estimated to be approximately \$88 million. This total is made up of the following components:

Table 9.8: Costs for Transportation Improvements	
On-Site Improvements	Initial Cost
Arterial Roadways	\$ 28,008,000
Soundwalls	4,469,000
Multi-Purpose Paths	4,466,000
Landscaping	9,582,000
Entries	2,210,000
Traffic Signals	4,725,000
Intersection Channelization	876,000
Bicycle Facilities	118,000
Railroad Crossings	7,625,000
Bus Transit Program	2,936,000
Subtotal	\$ 66,015,000
Off-Site Improvements	
Regional Roadways	\$ 5,882,000
Freeway Interchanges	14,118,000
Freeway Mainline	1,519,000
Altamont Rail Platform	359,000
Subtotal	\$ 21,878,000
Total, On-Site and Off-Site	\$ 87,893,000
Note: Mococo Station is included in estimate for bus transit	

These cost estimates assume dedication of street right-of-way and sites for transit stations. In-tract roadways are not included in these costs and will not be included in the PFP; development of these roads will be the responsibility of individual builders. A 35% to 50% mark-up is included where appropriate to cover engineering, design, plan check, inspection, and other soft costs.

Phasing of transportation improvements will generally relate to the phasing of residential and non-residential land uses. The traffic monitoring program will result in annual updates to the Roadway Improvement Plan ~~transportation design and construction plan~~ which will initially be prepared after approval of the Master Plan. Improvements will be developed on an as-needed basis to maintain the LOS standards identified in this chapter.

The implementation procedures discussed in Sections 9.2: Freeway Improvements, to 9.5: On-Site Roadway Circulation and Design, include anticipated start-up events for construction of freeway and Arterial improvements. On-site roadways will be phased consistent with the amount and location of development. ~~each Specific Plan will be accompanied by a detailed transportation plan for facilities needed to serve the proposed development.~~ Phasing of County roads will be controlled by the County and coordinated with the community's Roadway Improvement Plan. ~~transportation plan.~~

For purposes of the PFP, assumptions have been made regarding absorption of the first Specific Plan and subsequent land uses. The actual roadways needed to serve the first Specific Plan have been evaluated in detail and corresponding costs have been estimated. The remaining costs for on-site roadways, soundwalls, paths and landscaping (net of costs associated with the first Specific Plan) have been phased based on acreage assumed to absorb in future years. These assumptions and cost breakdowns are included in the PFP.

Bus transit and bicycle facilities will be provided incrementally throughout buildout of the community, with transit stops, shelters, bicycle lockers and racks in each neighborhood. The Mococo multimodal station will be built after passenger service is initiated. ~~approximately half way through development of the Master Plan.~~

Railroad crossings and intersection channelization improvements will be constructed in response to traffic volume and circulation patterns in order to maintain the required level of service.

Table 9.9: Summary of Transportation Trigger Points summarizes the phasing information included in the prior sections of this chapter.

**Table 9.9:
Summary of Transportation Trigger Points**

IMPROVEMENT	TRIGGER
Freeway Main Line	
<u>Widen I-205 - 4 to 6 lanes (I-580 to 11th Street)</u>	<u>Estimated by 1997</u>
<u>Widen I-205 to 6 lanes (11th Street to I-5)</u>	<u>To be determined by Caltrans</u>
<u>Add auxiliary lanes to I-580 west of I-205</u>	<u>To be determined by Caltrans</u>
<u>Altamont Corridor Strategic Plan preparation and implementation</u>	<u>To be determined by Caltrans</u>
Freeway Interchange	
<u>Project Study Report (Patterson Pass Road/I-205)</u>	<u>To be determined in Development Agreement</u>
<u>Ramp intersection signals (Patterson Pass Road/I-205)</u>	<u>1,600 dwelling units (DU's)</u>
<u>Add 2-lane bridge (Patterson Pass Road/I-205)</u>	<u>3,500 DU's</u>
<u>Add 2 loop ramps (Patterson Pass Road/I-205)</u>	<u>3,500 DU's</u>
<u>Add third 2-lane bridge to yield 6 lanes (Patterson Pass Road/I-205)</u>	<u>9,660 DU's</u>
<u>Add 1 loop ramp and widen on ramps (Patterson Pass Road/I-205)</u>	<u>12,880 DU's</u>
<u>Install ramp intersection signals (Grant Line Road/I-580)</u>	<u>4,830 DU's</u>
<u>Widen underpass to 4 lanes(Grant Line Road/I-580)</u>	<u>8,050 DU's</u>
<u>Widen ramps to 2 lanes & signalize(Grant Line Road/I-580)</u>	<u>8,050 DU's</u>
<u>Re-align ramps to final configuration(Grant Line Road/I-580)</u>	<u>12,880 DU's</u>
<u>Project Study Report (Grant Line Road/I-580 Interchange)</u>	<u>To be determined by Caltrans</u>
<u>Project Study Report (Patterson Pass Road/I-580 Interchange)</u>	<u>May be combined with Project Study Report for Patterson Pass Road/I-205</u>
County Arterial Road Improvements	
<u>Patterson Pass, Byron to I-205 (to 4 lanes)</u>	<u>4,100 DU's</u>
<u>Patterson Pass, Central to I-205 (to 6 lanes)</u>	<u>9,660 DU's</u>
<u>Patterson Pass, Central to I-205 (to 8 lanes)</u>	<u>12,080 DU's</u>
<u>Patterson Pass, Main to Byron Road (to 6 lanes)</u>	<u>12,080 DU's</u>
<u>Patterson Pass, I-205 to I-580 (to 4 lanes)</u>	<u>12,080 DU's</u>
<u>Grant Line, Patterson Pass to Alameda County (to 4 lanes)</u>	<u>8,050 DU's</u>
<u>Grant Line, Patterson Pass to Byron Road (to 4 lanes)</u>	<u>70 DU's</u>
<u>Grant Line, Alameda line to I-580 (to 4 lanes)</u>	<u>9,660 DU's</u>
<u>Byron Road, Patterson Pass to Marina Boulevard (to 4 lanes)</u>	<u>8,050 DU's</u>
<u>Byron Road, Marina Boulevard to Alameda County (to 4 lanes)</u>	<u>12,080 DU's</u>
<u>Byron Road, Patterson Pass to Grant Line (to 4 lanes)</u>	<u>9,660 DU's</u>
<u>Byron Road, Patterson Pass to Wicklund (to 6 lanes)</u>	<u>12,080 DU's</u>

Mountain House County Arterial Intersection Improvements	
Byron Road and North Marina Blvd.	
Byron Road and Patterson Pass Road (*)	4,100 <u>DU's</u> or sooner
Byron Road and Henderson Road (*)	4,100 <u>DU's</u> or sooner
Patterson Pass Road and Main Street	
Patterson Pass Road and Mountain House Blvd. (*)	4,100 <u>DU's</u> or sooner
Patterson Pass Road and Mascot Blvd. (*)	4,100 <u>DU's</u> or sooner
Patterson Pass Road and Grant Line Road(*)	4,100 <u>DU's</u> or sooner
Patterson Pass Road and Van Sostan	
Patterson Pass Road and South Central Parkway (*)	4,100 <u>DU's</u> or sooner
Grant Line and De Anza Boulevard	
Grant Line and Central Parkway	
Grant Line and Marina Boulevard	
Mountain House Community Arterial Intersection Improvements	
Central Parkway and North Patterson Pass Road	In conjunction with roadway improvements.
Central Parkway and De Anza Boulevard	"
Central Parkway and A Street	"
Central Parkway and Main Street	"
Central Parkway and Mountain House Boulevard	"
Central Parkway and Mascot Boulevard	"
De Anza Boulevard and Mascot Boulevard	"
De Anza Boulevard and Mountain House Boulevard	"
De Anza Boulevard and Main Street	"
De Anza Boulevard and Marina Boulevard	"
Marina Blvd. and North Patterson Pass Road	"
Marina Blvd. and Kelso Road	"
Marina Blvd. and Main Street	"
Marina Blvd. and Mascot Boulevard	"
<u>De Anza Boulevard and Von Sostan Road</u>	"
<u>C Street and Mountain House Boulevard</u>	"
<u>D Street and Mountain House Boulevard</u>	"
North Patterson Pass Road and River Road	"

Mountain House Intersection Signalization and Channelization	
Central Parkway and North Patterson Pass Road	In conjunction with roadway improvements.
Central Parkway and De Anza Boulevard	"
Central Parkway and A Street	"
Central Parkway and Main Street	"
Central Parkway and Mountain House Boulevard.	"
Central Parkway and Mascot Boulevard	"
De Anza Boulevard and Mascot Boulevard	"
De Anza Boulevard and Mountain House Boulevard	"
De Anza Boulevard and Main Street	"
De Anza Boulevard and Marina Boulevard	"
Marina Blvd. and North Patterson Pass Road	"
Marina Blvd. and Kelso Road	"
Marina Blvd. and Main Street	"
Marina Blvd. and Mascot Boulevard	"
Central Parkway and Patterson Pass Road North	"
North Patterson Pass Road and River Road	"
Local and Regional Bus and Shuttle Transit Service	
Demand-responsive transit to Tracy and to major employment destinations from residential areas.	25 <u>DU's</u>
Demand-responsive local transit service between the existing neighborhood centers and existing employment and retail areas within the community.	700 <u>DU's</u>
Regional fixed route transit service, using lift-equipped buses, connecting the major transfer points among existing neighborhood centers with Tracy, Stockton, Lawrence Livermore Laboratories, and the BART East Dublin/Pleasanton station.	prior to 4,100 <u>DU's</u>
Local and regional transit service expanded to provide more frequent service.	prior to 8,200 <u>DU's</u>
Upon implementation of passenger service over the Altamont Pass on either the SP or UP lines, bus and/or shuttle service shall be provided between the Town Center (or another central transfer location if the Town Center has not yet been built) and the nearest station at a service frequency consistent with the passenger rail service schedule.	
Regional Rail Transit	
Development of a new Altamont station near I-580 at the time that passenger service is implemented.	<u>After passenger service is initiated</u>
A passenger platform, and multi-modal station or other facility commensurate with passenger boarding demand, shall be developed on the Mococo line north of Byron Road and west of Patterson Pass Road. <u>This facility shall provide a connection to local transit service.</u>	<u>After passenger service is initiated</u>
	<u>Upon implementation of passenger service on the Mococo line through the community.</u>
<u>The Mococo Station facility shall be incorporated into existing local transit routes at a service frequency consistent with the passenger rail service schedule on the Mococo line.</u>	<u>Upon implementation of passenger service and completion of the Mococo Station facility.</u>

Rail Crossings	
At least two rail crossings shall be provided to serve the area north of Byron Road.	Upon completion of the first residential <u>Specific Plan</u> neighborhood north of Byron Road.
The existing at-grade crossing at Wicklund Road shall be closed.	Upon completion of the new at-grade rail crossing at Patterson Pass/Byron Road.
The existing at-grade crossing at Henderson Road shall be improved to include crossing gates, flashing lights, and audible signals.	Prior to commencement of commercial or industrial building construction in the North Industrial Area.
<u>Class I bike paths</u>	<u>In conjunction with adjacent roadway.</u>
Sidewalks and Class II bike lanes shall be provided on all roadways crossing the SP tracks.	
The Mountain House Creek multi-use path shall be grade separated where it crosses the SP tracks.	
Fences or other obstacles shall be constructed along the SP right-of-way boundary to prohibit pedestrian access across the right-of-way except at designated crossings.	Upon development north of Byron Road.

Notes:

1. The selected trigger points assume that a balance of all land uses has been occupied. The Industrial/Commercial land uses will lag residential development; therefore using dwelling units as a trigger is a conservative approach.
~~In the event that a trigger date is approaching but it is apparent that the improvement is not yet needed or is in fact needed earlier, the trigger date may be changed by the County after an appropriate traffic analysis is completed and a supporting report is approved.~~
2. County Arterials covered in this table include lengths within or bordering the community. Trigger buildout is of all land uses designated by the Master Plan. ~~based on the Mountain House EIR traffic model.~~ This table addresses County Arterials only and does not address roadways internal to the community that are not County Arterials
3. Of the intersections specified above, those shown with an * shall be completed upon 4,100 DU Master Plan buildout or sooner, if standard signal warrants are met prior to 4,100 DU Master Plan buildout in terms of traffic. Each Specific Plan shall include provisions for necessary intersection improvements required to serve the cumulative traffic of the community.
4. All signalization and channelization shall be provided in conjunction with the roadway improvements or as needed if traffic studies support a deferral.

9.10.2 Operations and Maintenance

Road Street maintenance will be provided in a manner consistent with Section 9.6 of this Master Plan, by the CSD or a special district authorized to provide this service. Maintenance will conform to applicable County standards and may be funded by a combination of existing taxes and/or new service charges. Maintenance personnel, vehicles, and equipment may be shared with other maintenance crews to increase efficiency and decrease costs. Costs associated with road maintenance are included in the fiscal analysis in the PFP.

9.11 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Overall Requirements. Each Specific Plan shall:
 - Establish more precise locations of Arterial and Collector streets, pedestrian and bicycle facilities, and transit facilities within the Specific Plan Area;
 - Assess additional improvements required in the project vicinity to address increased levels of travel demand that may arise from the development contemplated in the Specific Plan.
 - Establish phasing and sequence of improvements.
- b) Assessment of Transportation Impacts. Each Specific Plan and accompanying environmental review shall assess the transportation impacts of Mountain House development on other Counties or cities. Model updates and trigger reviews shall be prepared by the proponent of each subsequent Specific Plan.
- c) On-Site Roadways. Each Specific Plan shall designate the final locations of Residential Collector Streets.
- d) Intersection Improvements. Each Specific Plan shall include provisions for necessary intersection improvements required to serve the cumulative traffic of the community.
- e) Parking. If an individual Specific Plan includes land uses with large parking concentrations such as the Town Center and the multi modal transit station, that might benefit from a structured parking plan, then the Specific Plan shall contain a generalized assessment of parking demand based upon the averages of the parking requirements for various land use designations included in the plan. This assessment shall contain TDM measures. The opportunity for shared parking shall be evaluated based upon the types of uses anticipated within a given zone and general estimates for required parking. The first Specific Plan shall establish a Park-and-Ride lot in the freeway commercial area located northwest of the Patterson Pass Road / I-205 interchange.
- f) Review of Bikeway System. At each Specific Plan stage the bikeway system shall be reviewed and updated to ensure conformance with goals and current conditions, and to ensure consistency with bikeways adjacent to the site. Each Specific Plan shall designate the locations of bicycle facilities.
- g) Pedestrian System. Each Specific Plan shall designate the locations of pedestrian facilities.
- h) Transit Facility in Town Center. The Specific Plan shall incorporate a central transfer facility. This facility shall provide the following amenities: bus parking, park and ride lot, sheltered passenger waiting area, rest rooms, ticket booths, and comprehensive map and schedule information.
- ~~h) Neighborhood Transit Centers. Each Specific Plan shall include provisions for a neighborhood transit center. A neighborhood transit center shall be constructed within each neighborhood in conjunction with the neighborhood park which shall provide the following amenities: lighted bus shelter, bench, telephone, waste receptacle, bicycle racks, and bike lockers.~~
- i) Rail Service. The impact of rail service on any development within the community adjacent to the Mococo line shall be minimized by establishing a building setback sufficient

to provide a safety and aesthetic buffer to adjacent uses. This setback shall be described in the Specific Plan for the applicable area.

- j) Rail Crossings. The first residential Specific Plan north of Byron Road shall provide at least two rail crossings to serve the area north of Byron Road. One of these crossings shall be the grade-separated crossing. The location of the at-grade crossing shall be determined by the location of initial residential development north of Byron Road.
- k) ~~Transportation Plan. Each Specific Plan will be accompanied by a detailed transportation plan for facilities needed to serve the proposed development.~~

CHAPTER TEN



AIR QUALITY AND TRANSPORTATION MANAGEMENT

CHAPTER TEN: AIR QUALITY AND TRANSPORTATION MANAGEMENT

10.1	INTRODUCTION	1
10.2	OVERALL ISSUES AND CROSS-REFERENCES	1
10.3	TRANSPORTATION DEMAND MANAGEMENT	3
10.3.1	TDM Measures	4
10.4	CLEANER FUELS	6
10.5	CONSTRUCTION PROGRAM FOR AIR QUALITY	7
10.6	HOUSES AND BUILDINGS	7
10.7	SPECIFIC PLAN REQUIREMENTS	8

List of Tables	
Table 10.1: Cross-References for Air Quality Issues	2

CHAPTER TEN: AIR QUALITY AND TRANSPORTATION MANAGEMENT

10.1 INTRODUCTION

This chapter on air quality compliance and transportation demand management identifies policies and implementation measures to be incorporated into the community's building systems, construction practices and transportation management programs.

In addition to being subject to the control and approval of the County, issues of air quality and transportation management at Mountain House are subject to the regulatory control of SJVUAPCD and COG's County Congestion Management Plan, as well as State and Federal requirements. The County Congestion Management Plan was adopted in November 1991, and the Air Quality Attainment Plan (AQAP) was adopted in January 1992. The policies and implementation measures contained in this chapter have been derived from these plans.

To avoid repetition, this chapter provides cross-references to other sections of the Master Plan that address issues affecting air quality. In particular, additional information is found in Chapter Three: Land Use, Chapter Eight: Energy and Telecommunications, and Chapter Nine: Transportation and Circulation.

10.2 OVERALL ISSUES AND CROSS-REFERENCES

The primary issue affecting air quality is the impacts of transportation, especially single occupant vehicles utilized for commuting, school trips, shopping, and other daily requirements. This section presents overall issues which are addressed in more detail throughout this chapter. Table 10.1: Cross-References for Air Quality Issues, presents cross-references to provisions contained in other chapters.

Objective: To reduce air quality impacts associated with development of residential, employment, and other land uses at Mountain House.

Objective: To reduce the normally expected number of automobile trips.

Policies:

- a) Telecommuting shall be promoted in order to reduce automobile trips.
- b) Alternative transportation modes including walking, bicycling, transit, or cleaner fuels vehicles shall be supported.
- c) Vehicle miles traveled shall be reduced through community design to reduce internal trips lengths and create a jobs/housing balance to reduce external trips.
- d) Air pollution from non-automobile sources shall be reduced.

Implementation:

- a) References. Table 10.1 provides references to this and other chapters of the Master Plan that provide further implementation measures for achieving the above policies.

**Table 10.1:
Cross-References for Air Quality Issues**

The following is a list of provisions contained within the Master Plan which enhance air quality mitigation by reducing the use and trip lengths of single occupancy vehicles, encouraging alternative transportation modes, orienting community design to reduce vehicular traffic, and implementing a TDM program. The list also includes other air quality mitigations contained in the Master Plan that are not related to transportation.

TDM Measures	Master Plan References
Commuter Rail Services	See Chapter Nine
Immediate Highway Access	See Chapter Nine
Regional (HOV) Facilities	See Chapter Nine
Jobs/Housing Balance	See Chapter Three
Telecommuting/Satellite Business Centers	See Chapter Eight
Land Use and Circulation Design	See Chapters Three, Four and Nine
Bicycle/Pedestrian Trails	See Chapters Seven and Nine
Location of Schools/ Neighborhood Center/ Employment/Parks	See Chapters Three, Five and Seven
Child Care	See Chapter Five
Transit Center/Intermodal Facility	See Section 10.3: Transportation Demand Management, and Chapter Nine
Park and Ride Lots	See Chapter Nine
Transit Service	See Section 10.3: Transportation Demand Management, and Chapter Nine
Maximum Level of Parking	See Chapter Nine
Parking Spaces for Carpools/ Compact/Cleaner Fuel Vehicles	See Chapter Nine and Section 10.4: Cleaner Fuels
Traffic Signal Synchronization	See Chapter Nine
Bicycle Lockers/Racks	See Chapter Nine
Showers and Lockers	See Chapter Nine
Passenger Loading Areas	See Chapter Nine
Community Transportation Management Association	See Section 10.3: Transportation Demand Management
Transportation Coordinator	See Section 10.3
Personalized Matching Assistance (PMA)	See Section 10.3
On-Site Sale of Transit Passes/Tickets	See Section 10.3
Vanpool Program	See Section 10.3
Annual Report	See Section 10.3 and Chapter Sixteen

Five Year Update	See Section 10.3
Transit/Rideshare Information	See Section 10.3
Special Promotions	See Section 10.3
Other Air Quality Measures	Master Plan References
Tree Planting	See Chapters Four and Nine.
Cleaner Fuels Shuttle	See Section 10.4: Cleaner Fuels
Cleaner Fuel Vehicles	See Section 10.4
CNG Fueling Station	See Section 10.4
Pre-Construction	See Section 10.5: Construction Program for Air Quality
During Construction	See Section 10.5
General Fugitive Dust	See Section 10.5
Ozone Precursors	See Section 10.5
Natural Gas Lines/Electrical Outlets	See Section 10.6: Houses and Buildings
Water Heaters	See Section 10.6
Fireplaces	See Section 10.6

10.3 TRANSPORTATION DEMAND MANAGEMENT

The San Joaquin Valley Air Basin (SJVAB) is classified as a non-attainment area for ozone. The 1993 California Clean Air Act required the San Joaquin Unified Valley Air Pollution Control District (SJVUAPCD) to develop an Air Quality Attainment Plan which includes:

"Transportation control measures to achieve an average during weekday commute hours of 1.5 or more persons per passenger vehicle by 1999, and no net increase in vehicle emissions after 1997. [H&SC Section 40920(c)]."

In order to meet state and federal requirements to improve air quality, SJVUAPCD has developed a basin-wide trip reduction ordinance for adoption in late 1993. The "Commute-Based Trip Reduction" or Rule #9001, was released in draft form on June 28, 1993. This Master Plan for Mountain House includes a Transportation Demand Management (TDM) plan as a mechanism for complying with Rule #9001.

Transportation Demand Management (TDM) refers to transportation planning strategies aimed at reducing vehicular travel demand and reducing congestion. The TDM program for the Mountain House community is intended to promote the use of alternatives to the single-occupant vehicle (SOV) for peak hour trips taken within the project and elsewhere in the County, and thereby lessen congestion and improve air quality.

Transportation Management Associations (TMA's) are private, non-profit organizations run by a voluntary Board of Directors with a typical staff of one. TMA's help employers, developers, building owners, local government representatives and others to collectively establish policies, programs and services which address local transportation problems.

10.3.1 TDM Measures

Objective: To reduce the use of the single-occupant vehicle (SOV) for travel within and to and from the Mountain House community through implementation of specific trip reduction measures.

Policies:

- a) Mountain House employers of 100 or more employees shall achieve a 1.5 Average Vehicle Ratio (AVR) by the year 1999 for commercial and office work trips in the peak period. This policy meets the requirements of the 1993 California Clean Air Act and meets the requirements of the 6-28-93 Draft Rule #9001 - Commute Based Trip Reduction (SJVUAPCD).
- b) The use of alternative modes for trips, particularly bus and rail transit, taken within and to and from the community shall be promoted and facilitated.
- c) Rideshare matching for residents and employees of the community shall be promoted and facilitated.
- d) Participation in vanpools by Mountain House residents and employees shall be promoted.
- e) Residents and employees of the community shall be adequately informed regarding access, routing, and schedules for alternative transportation modes.
- f) The use of bicycling and walking shall be promoted and facilitated as viable means of commuting within the Mountain House community.
- g) Special promotions shall be used to encourage residents and employees to try alternative modes of transportation.
- h) Strategies for TDM implementation and monitoring shall comply with the San Joaquin County Congestion Management Plan. Implementation measures shall comply with the SJVUAPCD Air Quality Attainment Plan.
- i) The TDM program specified in the Master Plan shall be modified as necessary to comply with any Countywide Transportation Demand Management program devised by the County of San Joaquin.

Implementation:

- a) Preparation of the TDM Plan. The TDM Plan shall be prepared prior to submittal of the first Development Permit.
- b) TDM Plan Requirements. The TDM plan shall lay out provisions for implementation and administration of the TDM program, including the appropriate timing for a TDM coordinator, requirements for a monitoring program, and incentives for the use of cleaner fuels. The TDM plan shall establish permanent funding mechanisms for trip-reducing programs at both the employer end and the home end and shall include provisions for trip reduction monitoring. The plan shall meet the applicable requirements of the County Trip Reduction Ordinance and the County's Congestion Management Plan.

- c) Monitoring. TDM monitoring shall include:
 - Periodic collection of information regarding the success of TDM programs so that appropriate revisions to TDM programs can be made to increase effectiveness.
 - An annual meeting of residents to discuss transit and rideshare opportunities and make recommendations for improving access to alternative modes of transportation.
 - Annual or bi-annual basis documentation of the success of the TDM programs.
- d) Revisions to the Program. Every two years, the Air Quality/TDM program for Mountain House shall be revised based upon the results of the annual monitoring program and information regarding advances in technology and TDM strategies.
- e) Establishment of the TMA. The TDM Plan shall include provisions for the Mountain House Transportation Management Association (TMA). The Mountain House TMA shall coordinate with other TMA's at major off-site employment centers including Hacienda Business Park and Bishop Ranch. Participation in the TMA by developers, businesses, and building owners shall be required, through the terms of the TDM Plan.
- f) Personalized Matching Assistance Program. The TDM Plan shall establish a voluntary personalized matching assistance (PMA) program, in coordination with Caltrans Rideshare, for all Mountain House employees in order to encourage ridesharing.
- g) Vanpool Program. A vanpool program shall be established for Mountain House residents and employees through the TDM Plan.
- h) Information for Residents. Each household shall be provided with rail, transit, bicycle route, and ridesharing information at the time they purchase a home or rent an apartment. As service or facilities change, updated information shall be provided.
- i) Availability of Information. Transit passes, tickets, schedules, and route maps shall be available at the Town Center, at the Mococo intermodal transfer center (upon completion), and other common areas throughout Mountain House.
- j) Annual Meeting. An annual meeting of residents shall be held to discuss transit and rideshare opportunities and to make recommendations for improving access to alternative modes of transportation.
- k) Free Transit Service. Free transit service shall be provided to new residents of the Mountain House community for the first three months of occupancy.
- l) Reduced Fees for Transit Passes. Transit passes at a reduced fee shall be provided to employees who choose to use transit for their employees' commute.
- m) Promotions for Employees. Special ridesharing, bicycling, and transit promotions shall be conducted for employees who work in the community.
- n) Bicycle Facilities. See Section 9.8: Bicycle and Pedestrian Facilities for provisions relating to bicycle facilities.

10.4 CLEANER FUELS

Objective: To reduce emissions from public, fleet or private vehicles through the use of cleaner fuel vehicles.

Policies:

- a) The community shall develop and promote the use of natural gas, the cleanest of the fossil fuels.
- b) Programs to encourage the use of cleaner fuel vehicles shall be developed.

Implementation:

- a) CNG Fueling Station. Compressed natural gas fueling station shall be built within the community. The CNG fueling stations shall be ~~would be~~ available ~~on a staged basis, initially~~ for CSD, ~~vehicles including school, and transit vehicles, and~~ employers with fleet vehicles, ~~and the public~~. Fueling stations shall be made available to the public.
- b) ~~Specific Plan Requirements.~~ A CNG fueling station shall be sited and constructed in ~~Specific Plan I, with the likely location to be near the Henderson/Bethany Road intersection. Each subsequent Specific Plan shall include additional provisions for implementation of the fueling station.~~
- b) Specific Plan Requirements. The first CNG fueling station shall be constructed in Specific Plan I. Siting consideration shall be given to an I-205/Patterson Pass Road location, and other locations that are easily accessible for public use, and are located near the necessary PG&E gas facilities. Each subsequent Specific Plan shall include provisions for cleaner fuels and facilities.
- c) Fuels. ~~Initially,~~ Compressed natural gas (CNG) shall be one type of the cleaner fuel used. Other cleaner fuels shall be used ~~allowed~~ in order to take advantage of the current state of advances in technology.
- d) Preferential Parking. Parking facilities throughout the community shall provide preferential parking for cleaner fuel ~~to clean air vehicles and all school and transit vehicles as established in the TDM Program.~~
- e) Alternative Cleaner Fuel Vehicles. Individuals and business shall be encouraged to consider alternative fuel vehicles for personal and fleet use. Specific measures are as follows:
 - All Mountain House ~~CSD~~ publicly owned service and maintenance vehicles and all school and transit vehicles shall be cleaner fuel vehicles (i.e. CNG, methanol, or electric).
 - The use of alternative fuel vehicles shall be recognized as mitigation measures and credits toward trip reduction ordinance (TRO) compliance.
 - Long term infrastructure requirements for supporting increased numbers of alternative fuel vehicles shall be determined.

10.5 CONSTRUCTION PROGRAM FOR AIR QUALITY

Construction activities are a significant contributor to air quality impacts. These impacts are directly related to dust generation, construction traffic, and equipment discharges of fumes.

Objective: To mitigate air quality impacts due to construction activities.

Policies:

- a) Generation of dust and emissions shall be controlled during the pre-construction and construction phases.
- b) Emissions from operating equipment shall be controlled.
- c) Construction equipment and traffic shall be considered in air quality control.

Implementation:

- a) Regulations for Construction. ~~Community wide regulations shall be prepared that will regulate specific~~ Construction practices shall comply with according to the provisions of the SJVUAPCD.

10.6 HOUSES AND BUILDINGS

Objective: To reduce air emissions from ~~homes and buildings at~~ Mountain House.

Policies:

- a) The following emissions shall be targeted for reduction:
 - Emissions resulting from routine usage of gasoline appliances such as lawn maintenance equipment and barbecues.
 - NO_x emissions resulting from water heaters.
 - Emissions resulting from fireplace usage.

Implementation:

- a) Conditions of Approval. The following ~~items~~ shall be required as conditions of Tentative Map approval: ~~included in building plans prior to the issuance of a building permit:~~
 - Gas Outlets. Natural gas lines outlets shall be provided to backyards to encourage usage of natural gas ~~or electric~~ barbecues.
 - Electrical Outlets. 220 volt electrical outlets for recharging electric automobiles shall be provided in each garage. Electrical outlets shall be located on the outside of single family homes to accommodate electric lawn maintenance equipment and electric barbecues.
 - Water Heaters. Low nitrogen oxide (NO_x) emitting and/or high efficiency water heaters shall be required for all dwelling units.

- Fireplaces. Each single family residence shall have no more than one fireplace. If fireplaces are designed to be natural gas heating appliances of a zero clearance design, there is no limitation on the number of fireplaces per unit. Only EPA certified fireplaces shall be installed.

10.7 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) CNG Fueling Station. The first CNG fueling station shall be constructed sited in Specific Plan I. Siting consideration shall be given to an I-205/Patterson Pass Road location, and other locations that are easily accessible for public use, and are located near the necessary PG&E gas facilities. ~~with the likely location to be near the Henderson/Bethany Road intersection.~~ Each subsequent Specific Plan shall include provisions for cleaner fuels and facilities. ~~implementation of the fueling station.~~

CHAPTER ELEVEN



NOISE

CHAPTER ELEVEN: NOISE

11.1	INTRODUCTION	1
11.2	ASSUMPTIONS	1
11.3	MOBILE SOURCE NOISE CONTROL	2
11.3.1	Overall Mobile Noise Impacts	4
11.3.2	I-205 Freeway	5
11.3.3	Arterial Roadways	6
11.3.4	Railroad	6
11.3.5	Byron Airport	7
11.3.6	Agricultural Equipment	9
11.3.7	Existing Residences	9
11.4	STATIONARY SOURCE NOISE CONTROL	10
11.5	SITE AND BUILDING DESIGN	11
11.6	SPECIFIC PLAN REQUIREMENTS	11

List of Figures

Figure 11.1: Area of Potential Aircraft Noise Impact from Byron Airport	8
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List of Tables

Table 11.1: Future Traffic Noise Levels Due to Buildout of the Master Plan	3
Table 11.2: Exterior Noise Standards for Noise-Sensitive Uses Affected by Non-Transportation Noise Sources	10

CHAPTER ELEVEN: NOISE

11.1 INTRODUCTION

The intent of this chapter is to summarize the existing noise sources affecting the Master Plan area, identify applicable land use compatibility noise level criteria, and provide guidelines for evaluating and mitigating noise levels due to and upon the project site. Appendix 4-A: Design Manual contains additional discussion of noise control techniques.

Mountain House is located adjacent to several identified noise sources, primarily transportation related (roadway traffic and railroad operations). In addition, a new airport is being constructed approximately five miles to the north of the project site, with the main runway aligned with the southwest corner of the community. In addition, new noise sources, including additional roadway traffic, new transportation facilities and activities associated with commercial and industrial uses, will be introduced throughout the construction of the community.

Previous acoustical analyses which have been conducted for the project site include the Mountain House New Town General Plan Amendment Application, March 1990; Final Environmental Impact Report, Mountain House New Town General Plan Amendment, March 1992; and Final Environmental Impact Report on the San Joaquin County Comprehensive Planning Program, May 1992. Based upon the data and analyses contained in each of these reports, the major noise sources adjacent to, and within the Mountain House Master Plan area prior to development include I-205, Byron Road, Patterson Pass Road, Grant Line Road, Mountain House Road, and the Southern Pacific Transportation Company (SPTCo) railroad line operations.

11.2 ASSUMPTIONS

The following section describes assumptions for noise mitigation.

- a) The Noise Chapter of the San Joaquin County General Plan establishes a policy to limit exterior noise levels to 65 dB Ldn (a composite 24-hour average noise level descriptor) for residential developments, and 60 dB Ldn for schools, group care facilities, and hospitals, in order to provide an acceptable environment for outdoor activities.
- b) Standard construction practices under the current Uniform Building Code (UBC) are expected to provide an exterior to interior noise level reduction of 20 dB, therefore achieving an interior noise level of 45 dB Ldn with the windows in the closed position. This is generally considered an acceptable interior noise level to provide an adequate environment for indoor communication and sleep.
- c) The Noise Chapter of the San Joaquin County General Plan also requires an acoustical analysis for development of residential or other noise sensitive land uses in areas where the exterior noise level is predicted to exceed 60 dB Ldn.
- d) The County Development Title provides exterior noise standards for institutional and commercial noise sources. The standards presented in Section 11.4: Stationary Source Noise Control, differ from the Development Title in two respects. First, this Master Plan uses an hourly Leq (an average measurement over an hour's time of noise generated by a stationary source) while the Development Title uses a measurement of cumulative duration of a noise event in zero, one, five, 15, and 30 minute periods (see Table 9-1025.9 of the County Development Title). While the Development Title method is similar to the

hourly Leq, it is more difficult to monitor and enforce. ~~and so~~ The hourly Leq method is more appropriate for stationary sources and, therefore, is used ~~proposed~~ for Mountain House. Secondly, the standards presented in Table 11.2 ~~41-1~~ call for 55 dB (daytime) and 50 dB (nighttime) maximum hourly Leq. When translated into the measurements of cumulative duration used in the Development Title, these standards compare closely, with the Master Plan standards allowing two to three dB higher noise levels. These slightly higher noise levels are typical of urban communities which include commercial and industrial activities as planned for Mountain House.

Neither method can be compared directly compare with CNEL, a measurement utilized for mobile, transportation-related noise sources.

- e) Noise-sensitive land uses include residential, education, and hospital uses.

11.3 MOBILE SOURCE NOISE CONTROL

Mobile noise sources consist of transportation-related noise generators such as automobiles, trucks, trains, and airplanes. Common noise control techniques for mobile sources consist of setbacks and barriers. Setback areas can take the form of open space, frontage roads, recreational areas, yards, or similar uses. Barriers can consist of walls, berms, or other structures, such as buildings. In general, barriers are most effective when placed close to either the receiver or the source. Within Mountain House, barriers are expected to provide a reasonable means of mitigating roadway and railroad noise impacts at proposed locations of noise sensitive uses. However, site-specific analyses can not be conducted until grading plans and lot designs have been completed.

Table 11.1: Future Traffic Noise Levels, identifies noise levels expected along I-205 and important roadways at buildout of the community.

Table 11.1
Future Traffic Noise Levels with Buildout of the Master Plan

Segment No.	Roadway	ADT	Distance From Road Center Line to L _{dn} Contour (feet)		Distance From Road Right-of -Way to L _{dn} Contour (feet)	
			60 dB	65 dB	60 dB	65 dB
I-205						
1	Entire Length					
Patterson Pass Road						
2	I-205 to Grant Line Road					
3	Grant Line Road to Mascot Boulevard					
4	Mascot Boulevard to Byron Road					
Grant Line Road						
5	Hansen Road to Patterson Pass Road*					
6	Patterson Pass Road to Mountain House Boulevard					
Byron Road						
7	Hansen Road to Patterson Pass Road*					
8	Patterson Pass Road to Mountain House Boulevard					
DeAnza Boulevard						
9	Entire Length					
Marina Boulevard						
10	Byron Road to DeAnza Boulevard					
11	DeAnza Boulevard to Mascot Boulevard					
12	Mascot Boulevard to Grant Line Road					
Central Parkway						
13	Byron Road to DeAnza Boulevard					
14	DeAnza Boulevard to Main Street					
15	Main Street to Mascot Boulevard					
Main Street						
16	Marina Boulevard to Central Parkway					
17	Central Parkway to Patterson Pass Road (all commercial)					
Mountain House Boulevard						
18	Entire Length					
Mascot Boulevard						
19	Marina Boulevard to Central Parkway					
20	Central Parkway to Patterson Pass Road					

9/94

NOTE: Revised Noise Calculations to be included in Errata.

Notes:

1. Dimensions based on existing I-205 right-of-way (does not include future widening).
2. Rights-of-way may vary on some Arterials.
3. Noise Levels on unlisted roadways are estimated to be below County standard at the right-of-way edge.
4. Calculations do not include shielding due to I-205's elevation above the site.

11.3.1 Overall Mobile Noise Impacts

Objective: To mitigate noise from mobile sources.

Policies:

- a) Berms, barriers, soundwalls, setbacks, landscaping, or some combination of these measures shall be used adjacent to transportation noise sources to reduce indoor and outdoor noise exposure to acceptable levels.
- b) Where excessive sound wall heights would be necessary, a combination of setbacks and berms or sound walls shall be considered.
- c) Setbacks shall be used in conjunction with noise barriers where necessary to achieve acceptable levels of noise.
- d) On school sites, any outdoor instructional areas, or areas which require speech audibility shall be located outside the 60 dB Ldn noise contour or shielded from mobile noise in excess of 60 dB Ldn.
- e) Noise levels in primary outdoor use areas of new residential development, schools, and other noise-sensitive land uses shall not exceed an Ldn of 60 dB unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas to an Ldn of 60 dB. Where it is not possible to reduce noise in outdoor activity areas to an Ldn of 60 dB or less using practical application of the best available noise reduction measures, an exterior noise level of up to an Ldn of 65 dB may be allowed. Under no circumstances shall interior noise levels exceed an Ldn of 45 dB.

Implementation:

- a) Noise Control Techniques. Noise control techniques, as described in this Master Plan and in Appendix 4-A: Design Manual, shall be required as a condition of Tentative Map or use permit approval.
- b) Specific Plan Requirements. The Master Plan noise analysis shall be reviewed as part of each Specific Plan to determine if an update is required due to land use and circulation layouts proposed by the Specific Plan. See Section 11.6: Specific Plan Requirements, for contents of Specific Plan reviews.
- c) Noise Studies. If required by noise reviews conducted as part of Specific Plans, additional or supplemental noise studies shall be conducted at the Development Permit stage when pad elevations, final grading, and building locations are available. Such noise studies shall be prepared prior to approval of the first Development Permit for each Specific Plan Area.
- d) Residential Land Uses, Exterior Noise. Noise studies for specific residential projects proposed in noise impacted areas (exposed to an Ldn above 60 dB) shall address how noise levels in outdoor use areas, such as backyards, patios and decks, could be maintained at or below an Ldn of 60 dB.
- e) Noise-Sensitive Land Uses. Noise studies prepared for noise-sensitive land uses including care facilities, schools, hospitals, and parks shall address how noise levels in outdoor areas shall be maintained at or below an Ldn of 60 dB.

- f) Residential Land Uses, Interior Noise. Interior noise levels for housing proposed to be located in areas exposed to an exterior noise level of an Ldn above 60 dB shall be maintained at or below an Ldn of 45 dB. compliance shall be verified prior to the issuance of building permits.

11.3.2 I-205 Freeway

The I-205 freeway passes along the southern boundary of the community. It currently is four lanes wide and is operating at near capacity at peak hours. At the southwestern edge of the community, the freeway rises above the adjoining community to a height of about 25 feet.

The eastern portion of the freeway/community interface will be occupied by a community park and a business park. These uses were sited with noise mitigation as a major consideration. The western portion of the community is buffered from freeway noise by the presence of a berm along the aqueduct and low-lying hills. The southwestern end of the freeway/community interface abuts residential areas and will require special noise mitigation attention.

The most significant factor in specifying the proper noise mitigation is consideration of future expansions of the freeway. Such expansions will take place over the next 10 to 20 years and will certainly include widening to eight lanes and possible truck merging lanes. As of 1993, the designs for these improvements are conceptual and thus cannot be used as a basis for determining exact noise mitigation designs.

Objective: To adequately consider noise impacts from I-205.

Policy:

- a) The community shall be protected from noise impacts due to traffic on I-205.
- b) Noise mitigation barriers along the freeway shall be limited to earthen berms, embankments and vegetation.

Implementation:

- a) ~~Specific Plan Requirements. Noise studies shall be prepared as part of the development of Specific Plans with residential development, schools, or other sensitive land uses located within 2,000 feet of I-205. Such studies shall address freeway noise impacts.~~
- a) Specific Plan Requirements. For each Specific Plan, acoustical studies shall be required for noise-sensitive land uses proposed to be located in areas exposed to noise levels above an Ldn of 60 dB. These studies shall be submitted to the County with each Specific Plan. Appropriate mitigation measures shall be recommended in these studies and implemented by the appropriate party to ensure that the Ldn of 60 dB is maintained.
- b) Interstate 205 Mitigation. Noise mitigation for I-205 impacts shall be provided for noise sensitive uses by one or more of the following methods:
 - 1) Residential development shall be set back 600 feet from the centerline of I-205;

- 2) Earth berms or soundwall shall be built between the noise source and the noise-impacted area; or
- 3) Noise level reductions to an Ldn of 60 dB shall be achieved through site planning and building orientation.

11.3.3 Arterial Roadways

The community's design includes many Arterial roadways that will generate significant traffic volumes and therefore potential noise impacts. These roadways will vary significantly in width, traffic and design and thus each will require a separate noise evaluation.

Objective: To adequately consider noise impacts from Arterial roadways within the Master Plan area.

Policy:

- a) Each Major and Minor Arterial shall be considered as a source of noise that possibly could require mitigation.

Implementation:

- a) Sound Barriers. Noise studies prepared at the Development Permit stage (see Section 11.3.1: Overall Mobile Noise Impacts) shall identify specific noise-reducing barriers sufficient to meet the needed mitigation for noise generated from major and minor Arterials.

11.3.4 Railroad

The rail line that bisects the community parallel to Byron Highway is a major potential mobile noise source. At the present time the line has insignificant use due to the decision of the railroad company to use it only as a standby route through the Delta. The rail company has indicated that there is no contemplated future use of this line for freight use.

However, there are discussions in progress to use the line as a commuter passenger line. The likelihood of such service plus the timing of start up, service frequency and train speeds or types have not yet been determined. Train noise levels are extremely variable under different conditions. Until such time as the above factors are identified, a definitive noise study cannot be completed.

Objective: To adequately consider noise impacts from the rail line.

Policies:

- a) Land uses near the rail line shall be protected from noise impacts from rail line use. Noise mitigation structures shall be required along the edges of the railroad right of way abutting residential development.

Implementation:

- a) Specific Plan Requirements. As part of the noise analysis prepared for Specific Plans located within 1000 feet of the rail line, a review of potential noise impacts from trains shall be conducted and appropriate noise mitigation established.
- b) ~~Train Noise Mitigation.~~ In the event that rail service is established through the community, train noise mitigation measures shall be implemented.
- c) ~~Interim Measures.~~ Until such time as residential, school, or other noise sensitive development is proposed within 1000 feet of the tracks, or until such time as rail use is initiated, noise mitigation shall be limited to a sound wall along the tracks between the proposed transit station and Marina Boulevard.

11.3.5 Byron Airport

The location of the Byron (East Contra Costa County) Airport, approximately five miles northwest of the community, is a potential source of future noise impacts. The only major noise source that appears to impact the community is a straight-in, single-event landing approach that crosses over the southern portion of the community (see Figure 11.1: Area of Potential Aircraft Noise Impact from Byron Airport).

Light plane operations, the intended primary use of the airport, will produce minimal noise impacts on the community as most of these aircraft will pass over the community at heights that make their presence unnoticeable. However, the airport operators have indicated that increased traffic and larger craft can be expected. Preliminary noise analysis indicates that, even with the increased traffic, the passing heights are still high enough so that the noise within Mountain House is at acceptable levels.

Objective: To adequately consider noise impacts from Byron Airport.

Policy:

- a) The community shall be protected from significant noise impacts due to air traffic from Byron Airport.

Implementation:

- a) Monitoring. Increased traffic at Byron Airport shall be periodically reviewed in each Specific Plan to determine if noise mitigation studies are warranted. If so, appropriate noise mitigation shall be developed.
- b) Notice to Residential Property Owners. For residential property located within the area of potential aircraft noise impact shown in Figure 11.1: Area of Potential Aircraft Noise Impact from Byron Airport, a disclosure shall be provided by deed notice that property is located in an area that may be subject to aircraft flyover noise.



11.3.6 Agricultural Equipment

The western boundary of the community interfaces with low intensive agricultural uses which utilize infrequent mobile noise sources such as tractors and harvesting equipment.

Objective: To adequately consider noise impacts from agricultural activities west of the community.

Policies:

- a) Noise sources resulting from adjacent agricultural operations shall be considered and mitigated if within unacceptable standards.

Implementation:

- a) Community Edge. In accordance with the noise studies prepared at the Development Permit stage (see Section 11.3.1: Overall Mobile Noise Impacts above), each Development Permit shall include provisions for the improvement and construction of edge treatments including sound berms and/or soundwalls as specified in Section 4.3: Community Edges.

11.3.7 Existing Residences

Development of the community will increase noise exposure levels at existing residences. The noise levels will increase as traffic volumes increase along roads leading to the community.. The largest existing settlement is Grantline Village.

Objective: To minimize impacts on existing residences located along the roads to the Mountain House community.

Policies:

- a) Outdoor use areas of existing residences that are projected to be impacted (i.e., would experience an increase of five dB in the Ldn) by project-generated traffic noise at buildout shall be protected from excessive noise. Individual residences could take the form of constructing soundwalls along the roadways, soundproofing homes, or building barriers around specific portions of yards to provide shielded outdoor spaces.

Implementation:

- a) Noise Mitigation for Grantline Village. The CSD shall develop a plan for mitigating impacts on existing residences adjacent to Grantline Road. The plan shall identify the mitigation necessary to reduce exterior noise levels to an Ldn of 65 dB and interior noise levels to an Ldn of 45 dB or less. The plan shall be prepared prior to the widening of Grantline Road. Noise mitigation measures shall be implemented at the same time widening of the road occurs.

11.4 STATIONARY SOURCE NOISE CONTROL

Stationary noise sources include industrial, commercial, or utilities which create a constant or periodic noise in a fixed location. Examples are loading dock activities, air handling systems, or public address systems. In planning a new community, stationary noise impacts are not as predictable as mobile sources because the specific businesses and equipment must first be identified.

Objective: To control stationary noise sources.

Policies:

- a) A daytime and nighttime hourly Leq standard shall be used to evaluate stationary noise sources at receiving residential land uses.
- b) As a means of providing noise level standards which account for stationary noise sources, new development of noise sensitive uses shall not be allowed where the noise levels due to stationary noise sources will exceed the community's noise level standards as set forth in Table 11.2: Exterior Noise Standards for Noise-Sensitive Uses Affected by Non-Transportation Noise Sources.

Implementation:

- a) Lowering of Noise Levels. Each of the noise levels specified in Table 11.2 below shall be lowered by five dB for simple tone noises or for noises consisting primarily of speech or music.

Table 11.2 Exterior Noise Standards for Noise-Sensitive Uses Affected by Non-Transportation Noise Sources		
Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Leq	55 dB	50 dB

2/16/94

Notes:

1. Stationary noise sources include equipment, utilities, or processes associated with industrial, commercial or public facilities which create a constant or periodic noise in a fixed location.
2. Noise-sensitive uses include residential, educational, and hospital uses.
3. See Section 11.2: Assumptions, for explanation of measurement units and relationship to Development Title.

11.5 SITE AND BUILDING DESIGN

Noise mitigation guidelines for site and building design are included in Appendix 4-A: Design Manual.

11.6 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Review of Master Plan Noise Analysis. The Master Plan noise analysis shall be reviewed as part of each Specific Plan to determine if an update is required due to land use and circulation layouts proposed by the Specific Plan.. These noise analysis reviews shall:
- Be the responsibility of the Specific Plan applicant.
 - Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
 - Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources where development has occurred or existing noise is already significant.
 - Estimate existing and projected (20-years) noise levels in terms of Ldn or CNEL and/or the standards of Table 11.1: Future Traffic Noise Levels Due to Buildout of the Master Plan, and compare those levels to the adopted policies of the General Plan.
 - Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the General Plan and Development Title. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
 - Recommend generalized changes to Specific Plan land use and circulation layout, including location of noise-sensitive uses and locations for sound walls, and provide more detailed requirements for noise mitigation to be addressed in development plans when pad elevations, final grading, and building locations are available.
- b) Acoustical Studies for Noise Sensitive Uses. For each Specific Plan, acoustical studies shall be required for noise-sensitive land uses proposed to be located in areas exposed to noise levels above an Ldn of 60 dB. These studies shall be submitted to the County with each Specific Plan. Appropriate mitigation measures shall be recommended in these studies and implemented by the appropriate party to ensure that the Ldn of 60 dB is maintained.
- ~~b) I 205. Noise studies prepared for Specific Plans with residential development, schools, or other sensitive land uses located within 2,000 feet of the I 205 shall address freeway noise impacts.~~
- c) Sound Barriers. Noise studies prepared at the Specific Plan stage shall identify noise-reducing barriers sufficient to meet the needed mitigation for noise generated from major and minor Arterials.
- d) Railroad Noise. As part of the noise analysis prepared for Specific Plans located within 1000 feet of the rail line, a review of potential noise impacts from trains shall be conducted and appropriate noise mitigation established.

- d) ~~Rail Line. Noise studies prepared for Specific Plans located within 1,000 feet of the rail line shall address railroad noise impacts.~~
- e) Aircraft Noise. Each Specific Plan shall include a review of increased traffic at Byron Airport and shall develop mitigation measures as appropriate.

CHAPTER TWELVE



POTABLE WATER SYSTEMS

CHAPTER TWELVE: POTABLE WATER SYSTEMS

12.1	INTRODUCTION	1
12.2	ASSUMPTIONS	1
12.3	POTABLE WATER SUPPLY AND DISTRIBUTION	2
12.3.1	Water Supply	2
12.3.2	Water Demand	6
12.3.3	Water Conservation	8
12.3.4	BBID Service to Interim Agricultural Operations	9
12.3.5	Raw Water Conveyance	10
12.3.6	Water Treatment Plant	13
12.3.7	Water Storage	16
12.3.8	Water Distribution System	17
12.3.9	Sludge Disposal	19
12.3.10	Siting Criteria	20
12.4	REGULATORY REQUIREMENTS AND PERMITS	22
12.5	PHASING AND COSTS	22
12.5.1	Capital Facility Cost and Phasing	22
12.5.2	Operations and Maintenance	23
12.6	SPECIFIC PLAN REQUIREMENTS	24

List of Figures

Figure 12.1: Riparian Water Rights Areas	3
Figure 12.2: Riparian Water Rights Areas/NW Area Enlargement	4
Figure 12.3: Water Supply Facilities	12
Figure 12.4: Conceptual Water Treatment Plant Site Layout	15
Figure 12.5: Water Distribution and Treatment Facilities Plan	18

List of Tables

Table 12.1: Potable Water Demand	7
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CHAPTER TWELVE: POTABLE WATER SYSTEMS

12.1 INTRODUCTION

This chapter describes the potable water supply for the Mountain House community.

12.2 ASSUMPTIONS

The potable water supply will be utilized for human consumption, irrigation and other uses within the residential, commercial, school, public and open space areas of the Mountain House community. The criteria used to plan and design the water supply facilities meet or exceed established San Joaquin County (County) and State of California (State) guidelines and standards. A brief summary of the criteria used for each element of the potable water supply system is provided below (also see Appendix 12-B: Design Criteria for Water Supply Facilities).

Design Component	Design Criteria Utilized
Water Demand	Water demand is calculated based on the boundaries and land use plan detailed in this Master Plan. Quantification is based on actual demands within a similar community accounting for land use type and implementation of water conservation measures. The estimated amount of water required for the entire Community at buildout is 9,849 ac. ft/year. This includes existing homes within the community that are currently serviced by private well.
Water Storage	Design based on typical engineering design standards which exceed County standards.
Water Treatment	Design based on criteria established by the State.
Water Distribution	Design based on County standards as stated in the County Department of Public Works Design Standards manual.

12.3 POTABLE WATER SUPPLY AND DISTRIBUTION

12.3.1 Water Supply

The water supply for the Mountain House community will be provided by the Byron Bethany Irrigation District (BBID) via their pre-1914 appropriative water right to divert water from the Sacramento-San Joaquin Delta and to a small degree by riparian water currently drawn from Old River. BBID water may be used for municipal, industrial and/or agricultural uses at any location within their district. Historical BBID diversions for agricultural customers within the Mountain House project area have generally occurred from April through October each year and have averaged about 9,413 ac. ft./year for the period from 1976 to 1991. The 9,413 ac. ft./year is the amount of water that BBID has agreed to wholesale to Mountain House.

The water service agreement between the CSD and BBID that has been approved and signed by BBID and will become effective upon its signing by the CSD after its formation (Appendix 12-A: Water Services Agreement Between BBID and Mountain House CSD). Any agreement between Mountain House and BBID regarding drainage will be approved by the San Joaquin County Department of Public Works.

Under a water exchange agreement between BBID and the State Department of Water Resources, surplus summer water (water not needed at Mountain House in the summer months) would not be diverted by BBID and would be allowed to flow down to the State's San Luis Reservoir for storage. In the winter months, in-lieu water would be diverted by BBID for use at Mountain House.

The exchange agreement with the State for winter water has been approved and signed by all parties and is now effective.

Figure 12.1: Riparian Water Rights Areas and Figure 12.2: Riparian Water Rights Area/NW Area Enlargement illustrate riparian water rights areas in the Master Plan area.

Assumptions:

- a) The project requires 9,849 ac. ft./year, resulting in an additional need of 436 ac. ft./year over the amount to be supplied by BBID. This additional need can be supplied by riparian rights. The amount of riparian water available to lands with existing riparian rights is limited to that which can be used on those same lands. Since the riparian land within the boundaries of the community equals 1,262 acres and the estimated use of urban water on the 1,262 acres is 2.05 ac. ft./year, then 2,600 acre feet of riparian water is available. Therefore the combined water available from BBID and riparian rights is 12,013 ac. ft./year (2,600 + 9,413).
- b) If the 436 ac. ft. of required riparian or other water is used, it shall be delivered to the treatment plant through the raw water conveyance pipeline used to convey BBID raw water. The water agreement between BBID and Mountain House includes provisions for the pumping of such waters.
- c) Lands within Mountain House that are not currently within the BBID service area must be annexed to BBID prior to service, if BBID water is to be used on these lands.

LEGEND



: RIPARIAN WATER RIGHTS

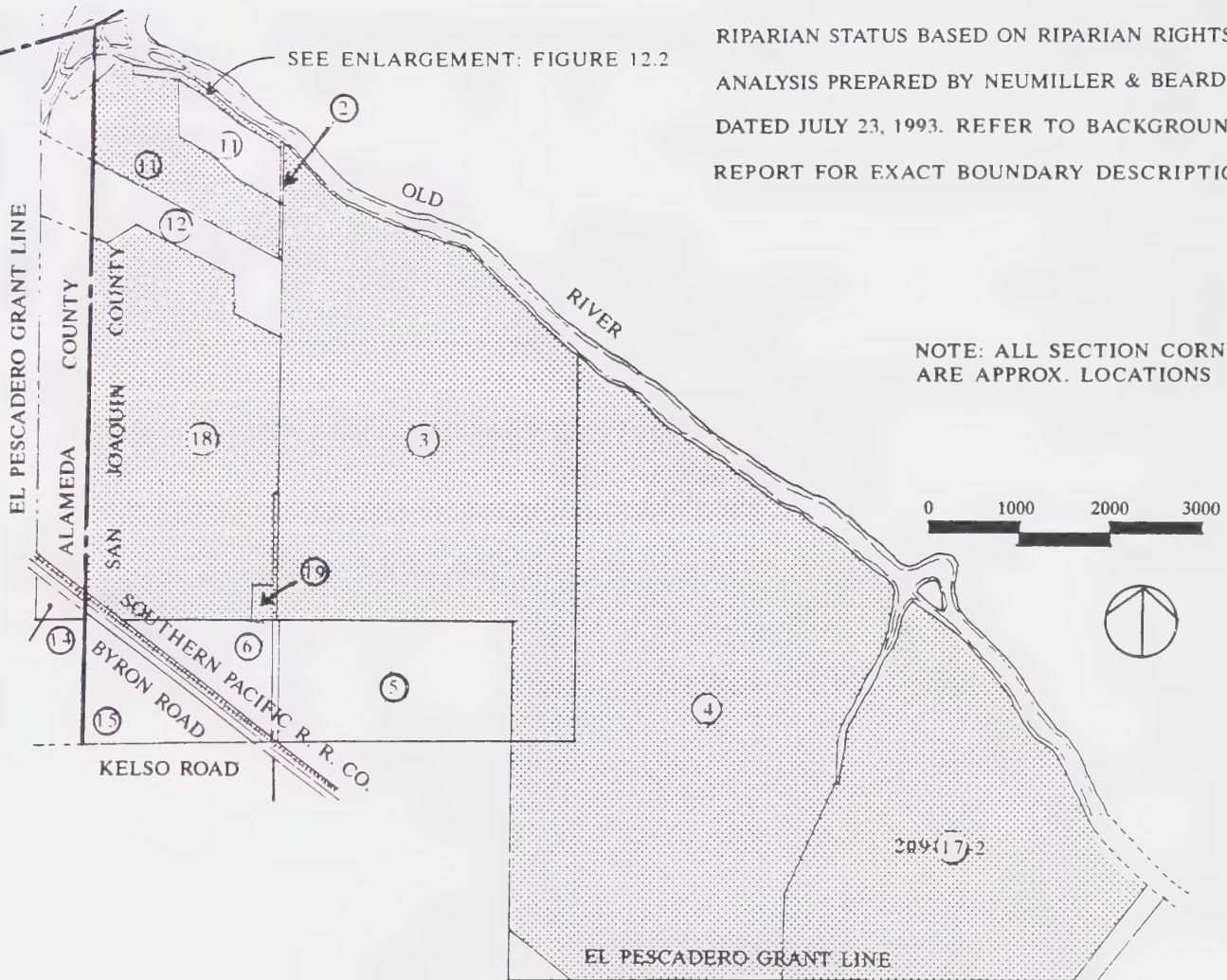


: ASSESSOR PARCEL NUMBERS



BOOK 209, PAGE 03 (UNLESS OTHERWISE NOTED)

RIPARIAN STATUS BASED ON RIPARIAN RIGHTS
ANALYSIS PREPARED BY NEUMILLER & BEARDSLEE,
DATED JULY 23, 1993. REFER TO BACKGROUND
REPORT FOR EXACT BOUNDARY DESCRIPTIONS.

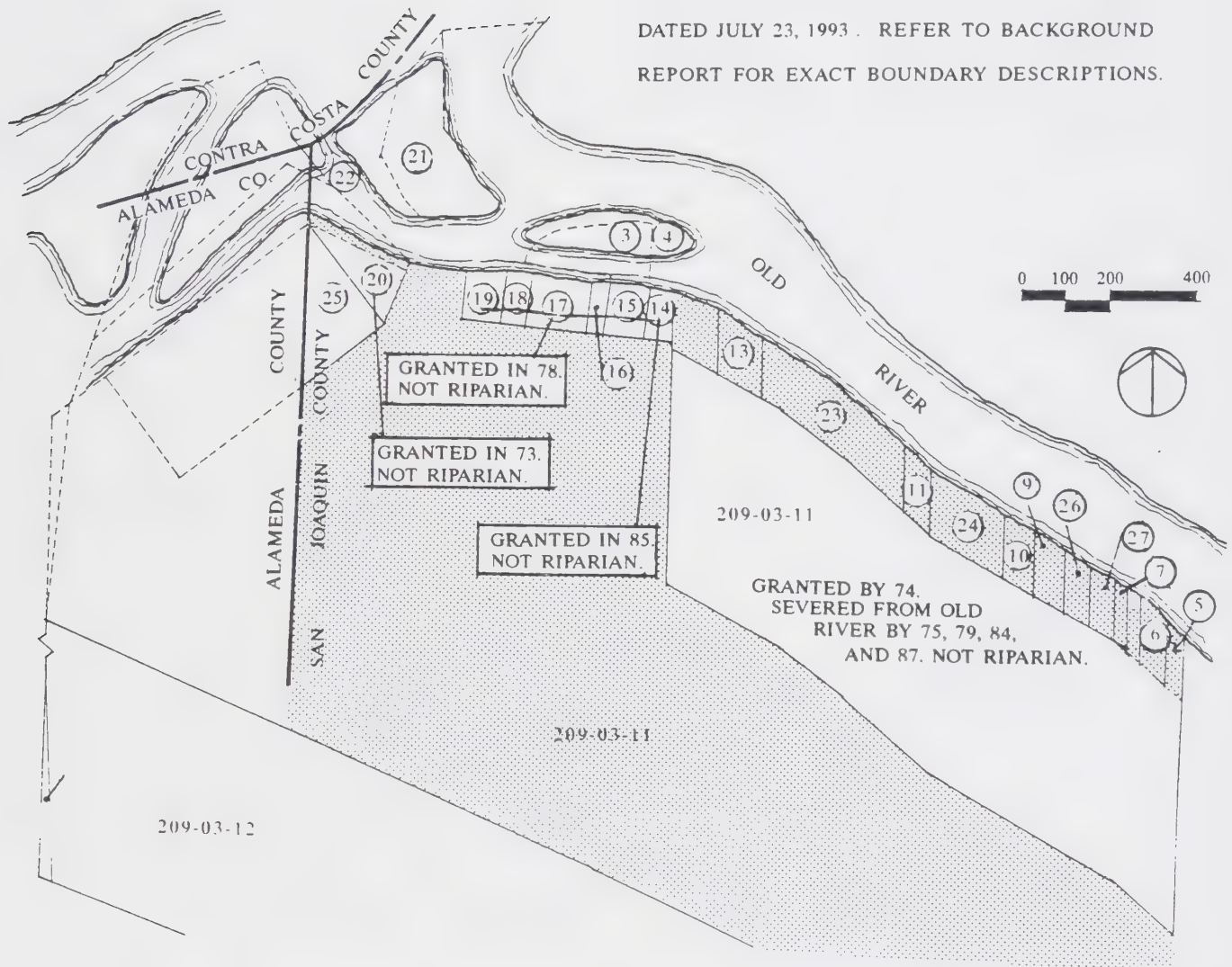
NOTE: ALL SECTION CORNERS
ARE APPROX. LOCATIONS



LEGEND

-  : RIPARIAN WATER RIGHTS
-  : ASSESSOR PARCEL NUMBERS
BOOK 209, PAGE 02 (UNLESS OTHERWISE NOTED)

RIPARIAN STATUS BASED ON RIPARIAN RIGHTS
ANALYSIS PREPARED BY NEUMILLER & BEARDSLEE,
DATED JULY 23, 1993. REFER TO BACKGROUND
REPORT FOR EXACT BOUNDARY DESCRIPTIONS.



Riparian Water Rights Areas/ NW Area Enlargement

Source: Neumiller & Beardslee

September 16, 1994

Chapter Twelve: Potable Water Systems

Objective: To provide the Mountain House community with an adequate year-round water supply.

Policies:

- a) Water supply and usage in Mountain House shall comply with the County Water Policy.
- b) A water service agreement specifying the quantity, cost and conditions of water service to the Mountain House community shall be maintained between the Mountain House Community Services District (CSD) and BBID.
- c) An exchange agreement shall be maintained between the State and BBID to provide a winter (November through March) water supply to the Mountain House community.
- d) The portions of the Mountain House project area which do not currently lie within the BBID service area shall be annexed to BBID (see Figure 1.6), unless alternative riparian water sources are used for these properties.
- e) The portions of the Mountain House area currently within the Westside Irrigation District and the Plain View Water District shall be de-annexed from their respective districts and annexed to BBID.
- f) Riparian water rights associated with land between Byron Road and Old River shall be reserved for project use. Until the parcels with riparian water rights are developed, the water diverted under riparian rights must be reserved for agricultural irrigation.
- g) Obsolete agricultural irrigation and drainage facilities shall be removed or properly abandoned upon development of an area.

Implementation:

- a) Consistency with County's Water Policy. Specific Plan II and each subsequent Specific Plan shall reevaluate the adequacy of the confirmed water supply for the remainder of the project in light of any potential or adopted restrictions on water diversion by BBID or DWR. The Specific Plans shall not be approved unless it can be demonstrated that the confirmed water supply is sufficient to serve the project through buildout.
- a) ~~Annexation to BBID. Prior to the submittal of a Development Permit for any development or improvement located outside the boundaries of the BBID, that will require delivery of BBID water for urban use as a specific condition of commencement of construction under the Development Permit, a "Will Serve" letter shall be obtained from BBID indicating their cooperation and general terms under which they would accept annexation for that land area (see Chapter Sixteen: Public Services Provisions, Section 16.5). Exceptions to this requirements will be determined at the time of filing a Development Permit. The entire land area of the Development Permit must be annexed into BBID prior to the issuance of the first construction permit for that land.~~

LEGEND

 : RIPARIAN WATER RIGHTS

(2) : ASSESSOR PARCEL NUMBERS

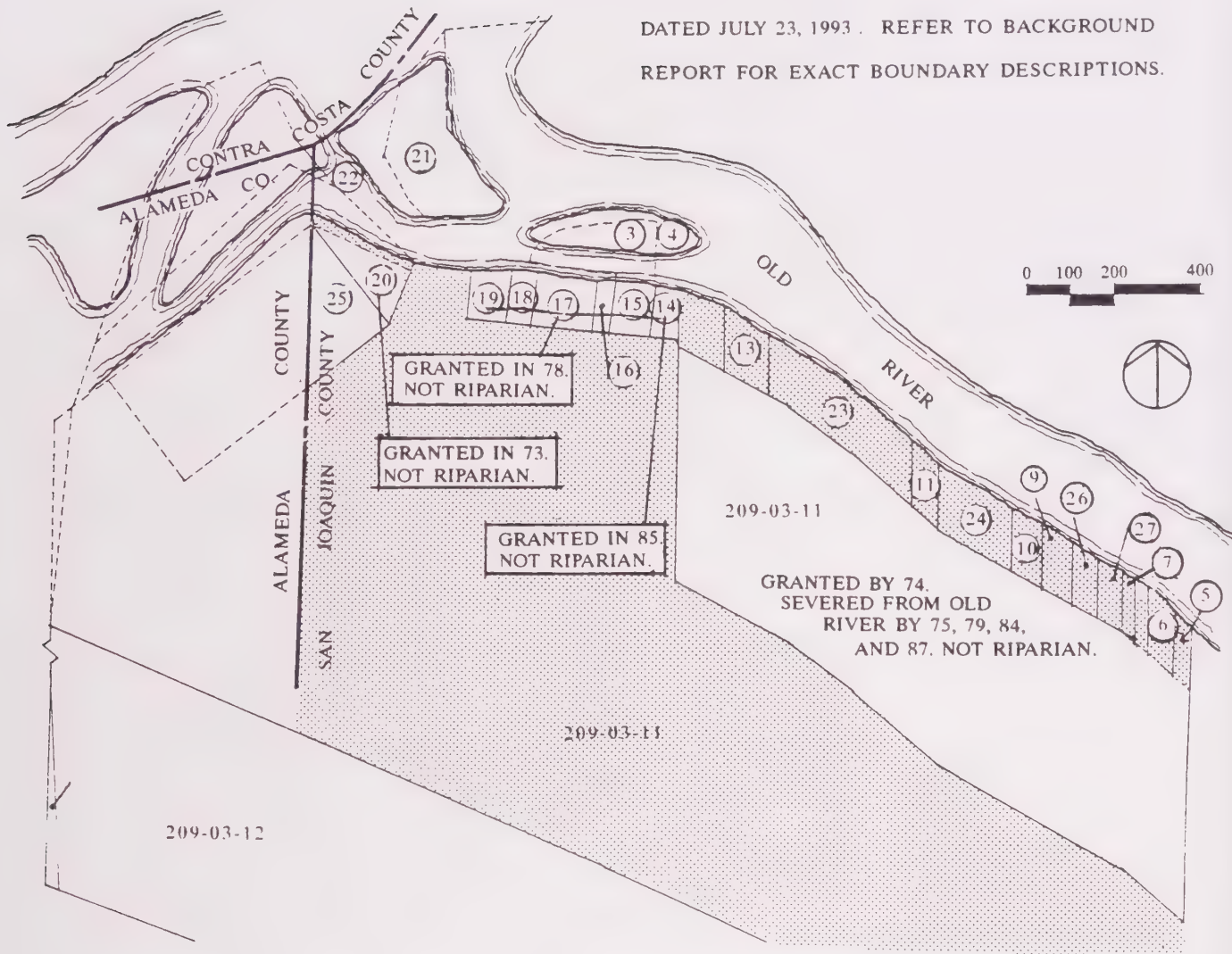
BOOK 209, PAGE 02 (UNLESS OTHERWISE NOTED)

RIPARIAN STATUS BASED ON RIPARIAN RIGHTS

ANALYSIS PREPARED BY NEUMILLER & BEARDSLEE,

DATED JULY 23, 1993. REFER TO BACKGROUND

REPORT FOR EXACT BOUNDARY DESCRIPTIONS.



Riparian Water Rights Areas/ NW Area Enlargement

Source: Neumiller & Beardslee

Objective: To provide the Mountain House community with an adequate year-round water supply.

Policies:

- a) Water supply and usage in Mountain House shall comply with the County Water Policy.
- b) A water service agreement specifying the quantity, cost and conditions of water service to the Mountain House community shall be maintained between the Mountain House Community Services District (CSD) and BBID.
- c) An exchange agreement shall be maintained between the State and BBID to provide a winter (November through March) water supply to the Mountain House community.
- d) The portions of the Mountain House project area which do not currently lie within the BBID service area shall be annexed to BBID (see Figure 1.6), unless alternative riparian water sources are used for these properties.
- e) The portions of the Mountain House area currently within the Westside Irrigation District and the Plain View Water District shall be de-annexed from their respective districts and annexed to BBID.
- f) Riparian water rights associated with land between Byron Road and Old River shall be reserved for project use. Until the parcels with riparian water rights are developed, the water diverted under riparian rights must be reserved for agricultural irrigation.
- g) Obsolete agricultural irrigation and drainage facilities shall be removed or properly abandoned upon development of an area.

Implementation:

- a) Consistency with County's Water Policy. Specific Plan II and each subsequent Specific Plan shall reevaluate the adequacy of the confirmed water supply for the remainder of the project in light of any potential or adopted restrictions on water diversion by BBID or DWR. The Specific Plans shall not be approved unless it can be demonstrated that the confirmed water supply is sufficient to serve the project through buildout.
- a) ~~Annexation to BBID. Prior to the submittal of a Development Permit for any development or improvement located outside the boundaries of the BBID, that will require delivery of BBID water for urban use as a specific condition of commencement of construction under the Development Permit, a "Will Serve" letter shall be obtained from BBID indicating their cooperation and general terms under which they would accept annexation for that land area (see Chapter Sixteen: Public Services Provisions, Section 16.5). Exceptions to this requirements will be determined at the time of filing a Development Permit. The entire land area of the Development Permit must be annexed into BBID prior to the issuance of the first construction permit for that land.~~

- b) Annexation to BBID. Annexation to BBID shall be required prior to the recordation of the Final Map for any area outside the boundaries of the BBID, that will require delivery of BBID water for urban use as a specific condition of commencement of construction.
- c) Riparian Water Use. For a specific land area of a Tentative Map Development Permit that contemplates the use of riparian or other water sources, an executed agreement between BBID and the CSD shall be provided prior to the recordation of a Final Map. ~~issuance of the first construction permit for that land area.~~ This agreement shall indicate that the parties have agreed to the terms under which BBID will wheel riparian water through their pumping and conveyance facilities to the Mountain House community as provided for in the BBID Water Services Agreement.

Annexation into BBID shall be required prior to any annexation to the CSD for those lands contemplating using BBID owned water. A landowner may annex into BBID without immediate plans to annex into the CSD, but with the understanding that the CSD can not supply treated water until CSD annexation is complete. All lands requiring urban BBID water must be annexed to the CSD before any BBID water can be delivered.

12.3.2 Water Demand

It is estimated that the water demand at buildout within the Mountain House community will be approximately 11,439 AF/YR if conservation measures are not implemented. When the conservation measures discussed in Table 12.1: Potable Water Demand are implemented, the water demand at buildout will be approximately 9,849 AF/YR.

Objective: To provide a safe, reliable and sufficient water supply to meet demands at buildout of the Mountain House community.

Policies:

- a) Development within Mountain House shall consume less water than in similar communities, and less than that assumed in current County standards.
- b) Sufficient safe and reliable water shall be provided.

Implementation:

- a) Water Demand. Water demand shall adhere to the water conservation requirements specified in Section 12.3.3: Water Conservation.
- b) Water Conservation Monitoring Program. A Water Conservation Monitoring Program shall be approved by the County prior to submittal of the first Development Permit. As part of each Specific Plan after Specific Plan I, the validity of Master Plan assumptions regarding water use shall be evaluated. If water demand exceeds that projected in the Draft Master Plan, actions shall be taken to reduce water usage. Actions could include a public information campaign, additional water conservation fixtures to be included in subsequent development, mandatory water rationing and on-site reclamation.

Table 12.1
Potable Water Demand

Land Use	Dwelling Units	Acres, 5	Comments	Base Demand Level Using County Standards		Base Demand Level Without Conservation Without Reclamation		Conservation Demand With Conservation Without Reclamation	
				Average Annual Water Use (gpd)	Total Annual Water Use (AF/YR)	Average Annual Water Use (AF/YR)	Total Annual Water Use (AF/YR)	Average Annual Water Use (AF/YR)	Total Annual Water Use (AF/YR)
RESIDENTIAL									
Very Low Density (R/VL)	69	69	2,3	450	35	1.50	103	1.30	89
Low Density (R/L)	4,880	1,085	2,3	450	2,460	2.50	2,713	2.00	2,170
Medium Density (R/M)	8,232	1,130	2,3	450	4,150	3.00	3,390	2.50	2,825
Medium High Density (R/MH)	1,920	160	2,3	450	968	3.50	560	3.00	480
Senior Housing (R/MH)	48	4	2,3	450	24	3.50	14	3.00	12
High Density (R/H)	549	31	2,3	450	277	4.00	122	3.50	107
Senior Housing (R/H)	207	12	2,3	450	104	4.00	46	3.50	40
Town Center (M/X)	200		2,3	450	101	4.00	100	3.50	100
Residential Totals	16,105	2,490			8,119		7,047		5,823
COMMERCIAL									
Neighborhood Commercial (C/N)	25		2,4	2,000	56	1.50	38	1.30	33
Community Commercial (C/C)	88		2,4	2,000	197	1.50	132	1.30	114
General Commercial (C/G)	63		2,4	2,000	141	1.50	95	1.30	82
Office Commercial (C/O) Town	56		2,4	2,000	125	1.50	84	1.30	73
Town Center/Mixed Use (M/X)	43		2,4	2,000	96	2.50	108	2.00	86
Commercial Totals		275			616		456		388
INDUSTRIAL									
Limited Industrial (I/L)	331		2,4	1,800	667	1.50	497	1.30	430
General Industrial (I/G)	110		2,4	1,800	222	1.50	165	1.30	143
Industrial Totals		441			889		662		573
OPEN SPACE									
Neighborhood Parks	60		2	4.50	270	4.50	270	4.00	240
Community Parks	180			4.50	808	4.50	808	4.00	718
Regional Parks	70			0.50	35	0.50	35	0.50	35
Golf Course	302			4.00	1,206	4.00	1,206	4.00	1,206
Marina/Other O.S.	62			1.00	62	1.00	62	0.50	31
Wetland	23		1	0.00	0	0.00	0	0.00	0
Landscape Buffers	3			1.00	3	1.00	3	0.50	2
Easements	65			2.00	129	2.00	129	2.00	129
Open Space Totals		764			2,513		2,513		2,361
SCHOOLS									
Elementary/Middle	192		2	2.00	384	2.00	384	1.80	346
High School	93		2	2.00	185	2.00	185	1.80	167
Schools Totals		285			569		569		512
PUBLIC									
Water Treatment	19			0.50	9	0.50	9	0.50	9
Wastewater Treatment	50			0.50	25	0.50	25	0.50	25
Transit	9		2	0.50	5	0.50	5	0.50	5
Churches/Civic	8			0.50	4	0.50	4	0.50	4
Major Street ROW									
Major Arterials	100			1.00	100	1.00	100	1.00	100
Minor Arterials	100			0.50	50	0.50	50	0.50	50
Interior Streets	206		1	0.00	0	0.00	0	0.00	0
Railroad	36		1	0.00	0	0.00	0	0.00	0
Public Totals		528			193		193		193
TOTALS		4,782			12,898		11,439		9,849

Comments:

12/8/93

1. Assumed to be non-irrigated acreage.
2. Assumed to have only a demand for potable water.
3. County demands expressed in gallons per day per dwelling unit.
4. County demands expressed in gallons per day per acre.
5. Based on land use dated 30 July 1993.

- b) ~~Water Usage.~~ The actual water usage shall be monitored on a routine basis to confirm the assumed estimates in Table 12.1: Potable Water Demand. If actual use exceeds the assumed per capita use, then additional conservation measures, and/or adjustments made to the water supply and distribution system, may be imposed prior to approval of subsequent Specific Plans.

12.3.3 Water Conservation

Because water is such a valuable commodity, it must be used wisely and efficiently. The State has directed existing communities to initiate water conservation to the maximum feasible level on a permanent basis. Currently, implementation is called for through the adoption of Best Management Practices (BMPs) for water conservation. The State has established a list of sixteen BMPs which communities should consider in their conservation programs. It has been assumed that, at a minimum, the Mountain House community will incorporate low-flow plumbing fixtures, water-conserving appliances and low-water using landscaping (e.g. xeriscape) into its community standards. It is estimated that the implementation of these measures will reduce overall water demands by approximately 14%.

Should the 14% conservation amount be realized, the community at buildout would generate a surplus of 2,164 ac. ft/year. If no conservation practices were realized, the total available water of 12,014 ac. ft/year would still be sufficient for the total community demand of 11,439 ac. ft/year.

It should be noted that reclaimed water will not be utilized within the project area for urban irrigation or industrial uses and thus will not be used to reduce potable water demands. Treated wastewater will be utilized off-site for agricultural irrigation as discussed in Chapter Fourteen: Wastewater Reuse.

Objective: To utilize the Mountain House water supply efficiently.

Policies:

- a) On-going water conservation shall be encouraged within the Mountain House community through the use of public information and education programs.
- b) Certain on-going water conservation measures shall be required through the enactment of community-wide regulations.
- c) Best beneficial use of reclaimed water shall be practiced.

Implementation:

- a) Public Information. The residents and patrons of the Mountain House community shall be informed about the importance of water conservation and ways which water use can be reduced through the establishment of programs promoting the benefits of such water conservation.
- b) Conservation Measures. The following conservation measures shall be required:
 - ~~Low Flush Toilets.~~ The installation of low flush toilets in residential, school, commercial, industrial and public buildings shall be incorporated into the community design and building standards.

- ~~• Showerheads. The installation of low flow showerheads in residential buildings shall be incorporated into the community design and building standards.~~
 - ~~• Appliances. The installation of water conserving appliances in residential buildings shall be incorporated into the community design and building standards.~~
 - Landscaping. Low-water-using landscaping (e.g. xeriscape) shall be incorporated into residential, school, commercial, industrial and other public areas within Mountain House (see Appendix 4-A: Design Manual).
 - Wastewater Reuse. Best beneficial reuse of treated wastewater shall be practiced.
- c) Water Rate. A water rate structure shall be developed which will encourage water conservation.
- e) ~~Penalty for Waste. The CSD shall establish penalties for water waste.~~

12.3.4 BBID Service to Interim Agricultural Operations

Due to the long buildout expected for the community, agricultural operations will continue to be active in some areas as development occurs in others. Provision of irrigation water is critical to ensuring the continuing viability of interim agricultural operations. Other land use considerations regarding interim agricultural operations are discussed in Section 3.2.4: Pre-Existing Land Uses.

The portion of the Master Plan area south of Byron Road is within the service area of Byron Bethany Irrigation District (BBID). BBID provides irrigation water through three irrigation canals, each of which is an unlined ditch and with piping only at crossings of roadways and drainage ways. The irrigation water applied to the farmland tends to raise the groundwater level. To keep the groundwater low and not adversely affect farming operations, BBID owns and maintains groundwater drain pipes along Patterson Pass and Byron Roads that carries away groundwater. The drain water is discharged to the Delta Mendota Intake Canal northwest of the Master Plan area in Contra Costa County.

A small portion of BBID's San Joaquin County service area is located outside of the Mountain House project area, adjacent to the southeast corner of the project area boundary. This area of land is currently provided with irrigation water via BBID's 155-foot-elevation canal. This portion of land will not be part of Mountain House, but continued irrigation water service will need to be provided.

Objective: To maintain water service to lands outside of the Mountain House project area which are within the BBID service area.

Objective: To maintain a supply of irrigation water to lands under agricultural use.

Policies:

- a) Continued irrigation water and drainage service shall be provided to the ~~area of~~ land within the BBID service area located east of the project site and Patterson Pass Road throughout project buildout. ~~Mountain House project area.~~

- b) Irrigation water service and drainage shall be maintained so long as required by farming practices. In order to assure continued service to remaining customers, BBID's ability to provide service shall not be impaired.
- c) The project shall provide permanent or interim facilities as needed, as each phase develops, that will assure continued service to BBID customers.

Implementation:

- a) Provision Continuation of Agricultural Water Service. The appropriate Specific Plans shall identify how water and drainage services to the land east of the project and Patterson Pass Road within the BBID service area would be affected. They shall identify the infrastructure needed to maintain these services and when construction of these facilities would need to be completed (schedule may be expressed in terms of when certain parcels are developed). ~~include provisions for continued water service to the BBID service area located east of the Mountain House area and Patterson Pass Road.~~
- b) Requirements for Agricultural Irrigation. To ensure an uninterrupted source of irrigation water to undeveloped land, Development Permits, as applicable, shall include a detailed assessment of how irrigation water and drainage services to land within the project site that has not been or is not immediately planned for development would be affected. The assessment shall include consideration of interruption of irrigation patterns, temporary interruptions in service due to installation of underground utilities, and access to farm fields by workers, equipment and trucks. A plan for constructing/modifying facilities to maintain irrigation water and drainage services and a schedule for constructing these facilities shall be included. All Development Permits shall consider water supply, drainage, interruption of irrigation patterns, temporary interruptions for the installation of underground utilities, and access for farm fields by workers, equipment and trucks.
- c) Farm Drainage Requirements. All Development Permit submittals shall include a report on the existing impacted farm irrigation drainage. Such plans shall include a map of existing farm drains that flow through or drain the Specific Plan area. Any such drains are to be identified on the maps as to type, location and function. The report will include an analysis of the impacts on the drainage system and a determination of the planned dispossession of the system. If any portion of the system is to be abandoned, the pipes and drains shall be removed unless reusable. If the drainage system is usable for the control of the water table and/or storm runoff, it may be integrated into the storm system and be subject to the same conditions required for storm runoff.
- d) Costs. Any costs associated with reconstruction or rerouting of irrigation waters caused by development shall be paid for by the individual development causing the reconstruction or rerouting subject to reimbursement if the first builder has to front larger area rerouting.

12.3.5 Raw Water Conveyance

New facilities are required to convey untreated (raw) water from the intake channel on the California Aqueduct to the Mountain House water treatment plant. These new

facilities will include a new raw water pump station and new raw water transmission pipelines from the raw water pump station to the water treatment plant.

The raw water pump station will be located along the eastern side of the Intake Channel to the California Aqueduct in one of the three following alternative locations:

- Adjacent to BBID's existing Pump Station 1 South;
- Directly north of the Byron Road crossing; or
- Directly south of the Byron Road crossing.

Depending on the preferred location of the raw water pump station, several alternative routes exist for the raw water transmission pipelines including:

- Along the south side of Byron Road;
- Along the north side of Byron Road; or
- Partially along the south side of Byron Road and then crossing over to the north side of Byron Road.

Based on space requirements for the raw water pump station and the costs associated with the raw water transmission pipeline, the preferred raw water pump station location is directly south of Byron Road along the intake channel to the California Aqueduct with the raw water transmission pipelines extending along the south side of Byron Road to the Herdlyn Substation, which will provide power to the raw water pump station, and then crossing over to the north side of Byron Road to the preferred water treatment plant site. This alignment avoids the potentially sensitive wetlands area located south of Byron Road near the Alameda/San Joaquin County line. Figure 12.3: Water Supply Facilities indicates the preferred location for the raw water pump station and the preferred alignment for the raw water transmission pipelines. Alternative locations and alignments, as described above, are also shown on Figure 12.3.

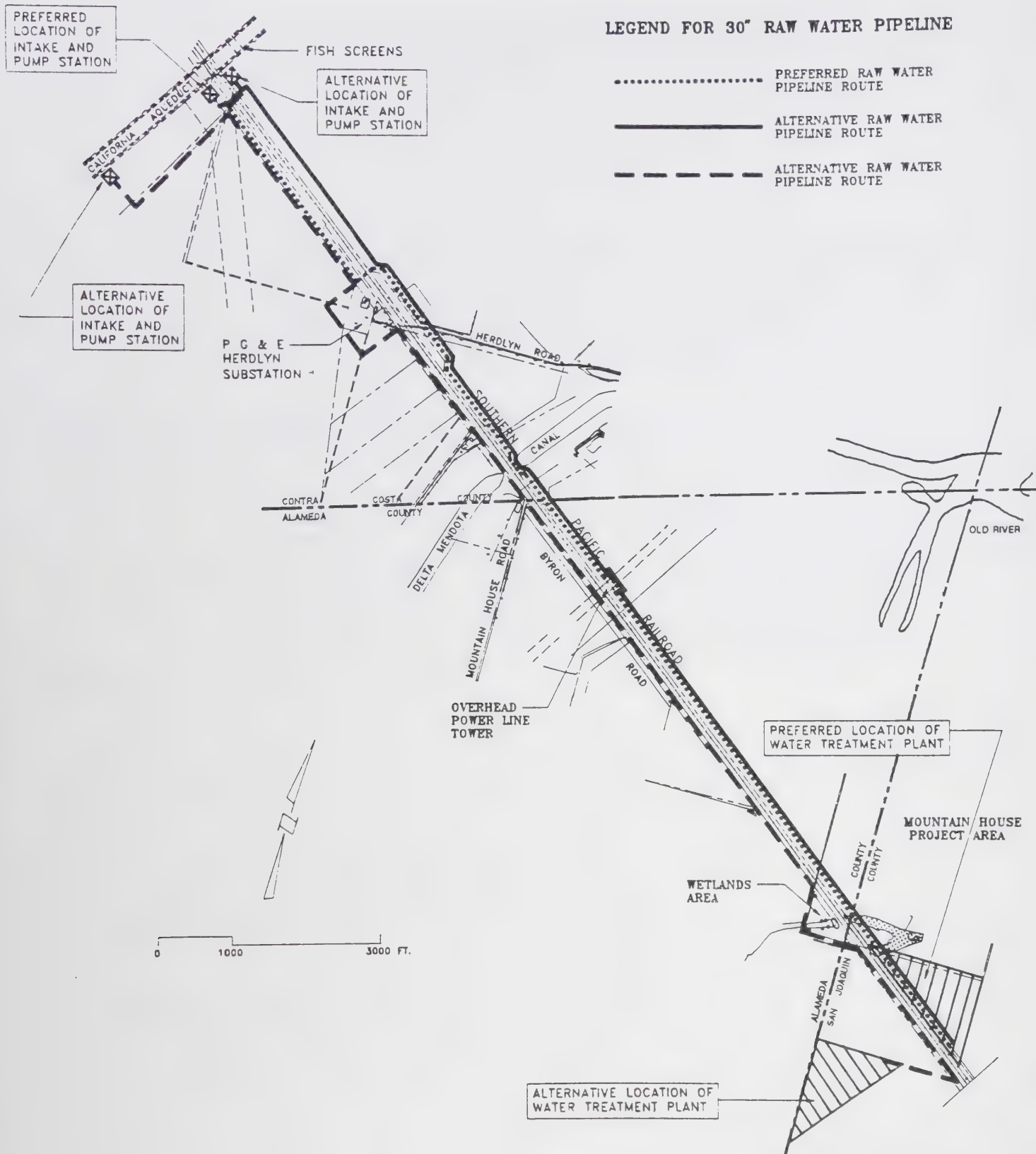
Objective: To provide adequate conveyance facilities to supply the community with raw water.

Policies:

- a) Conveyance facilities shall be provided appropriate backup equipment and power.

Implementation:

- a) Pump Station and Pipeline. The Development Permit for the initial phase of the water treatment plant shall include provisions ~~details~~ for a new or expanded pump station and conveyance pipelines from the water source to the treatment plant. The size and location of the pipelines shall be finalized prior to the County's approval of the water treatment plant.
- b) Capacities. Both the new pump station (or additional pumps) and the pipeline(s) shall be designed to convey the flow required to serve maximum day demands at Mountain House during the various phases of development. Ultimately, the capacity of the pump station and conveyance system will need to be approximately 20 mgd (31 cfs or 13,900 gpm).



Source: Siegfried Engineering Inc.

Water Supply Facilities

September 16, 1994

Chapter Twelve: Potable Water Systems

- c) Pump Station Requirements. The new pump station shall be equipped with electrically driven pumping units with the provision for backup diesel power in the event of a power outage. The entire pump station building and the pumps needed to serve the initial phases of development shall be constructed initially. Additional pumps shall be added to the pump station as development occurs and the demand for water increases. One standby pump shall be provided at all phases of the pump station phasing.
- d) Impact on Habitat. Construction of the BBID raw water conveyance pipelines from the intake off-site to the on-site water treatment plant shall not impact any special-status animal or plant species (see Chapter Seven: Recreation and Open Space, for description of species survey).

12.3.6 Water Treatment Plant

Mountain House is being planned during a time when major regulatory revisions for water quality are in progress. Both Federal and State agencies have made changes to drinking water standards and are proposing further changes, which will have significant implications for Mountain House in terms of required treatment processes, monitoring requirements and construction and operation and maintenance costs. Thus the proposed process and facilities are subject to change during subsequent design.

Siting criteria for the water treatment plant are addressed in Section 12.3.10: Siting Criteria.

Assumptions:

Processes will be designed to meet the following standards.

- a) A total of 99.9 percent reduction of Giardia cysts through filtration and disinfection; and
- b) A total of 99.99 percent reduction of viruses through filtration and disinfection.
- c) Limits on contamination by certain substances that are included on the U.S. Environmental Protection Agency's list drinking water contaminants.
- d) Compliance with the Surface Water treatment rule which requires disinfection of surface water supplies.
- e) Other regulations regarding disinfectants and disinfection by-products.
- f) Compliance with California's Title 22 regulation as administered by the California Department of Health.

Objective: To provide adequate and safe potable water to the community.

Policy:

- a) The treatment process shall be designed to meet the safety standards and regulations of all overseeing agencies. The treatment plant shall be constructed to minimize impacts on adjoining land uses in particular the adjacent wetlands. The treatment process shall be designed to provide the required capacity at each stage of its construction.

Implementation:

- a) Review Process. A Development Use Permit shall be required for the water treatment plant and shall be approved prior to the approval of the First Development Permit. The Use Permit application shall provide a schedule for ensuring that the water treatment plant is fully operational prior to the first Final Subdivision Map.
- b) Water Treatment Process. Improvements to the treatment process shall be studied as part of more detailed subsequent design. The treatment process shall include the following.

Raw Water Reservoir

The raw water reservoir's primary function is to serve as a pre sedimentation basin. This preliminary sedimentation reduces silt and settleable organic matter prior to chemical treatment. The secondary function of the raw water reservoir is to serve as emergency storage in case of temporary shutdowns of the raw water pump station due to maintenance or repairs.

Disinfection (Ozone) Contractors

The disinfection (ozone) contractors serve as a pretreatment oxidation and disinfection process.

Clarifier

The clarifier provides flocculation and sedimentation. Flocculation is the mixing of the water with chemical additions to form a coagulated floc which is passed along to the next step, sedimentation. Sedimentation, or clarification is where the particulate matter, chemical floc, and precipitates from suspension are removed through gravity settling.

Filters

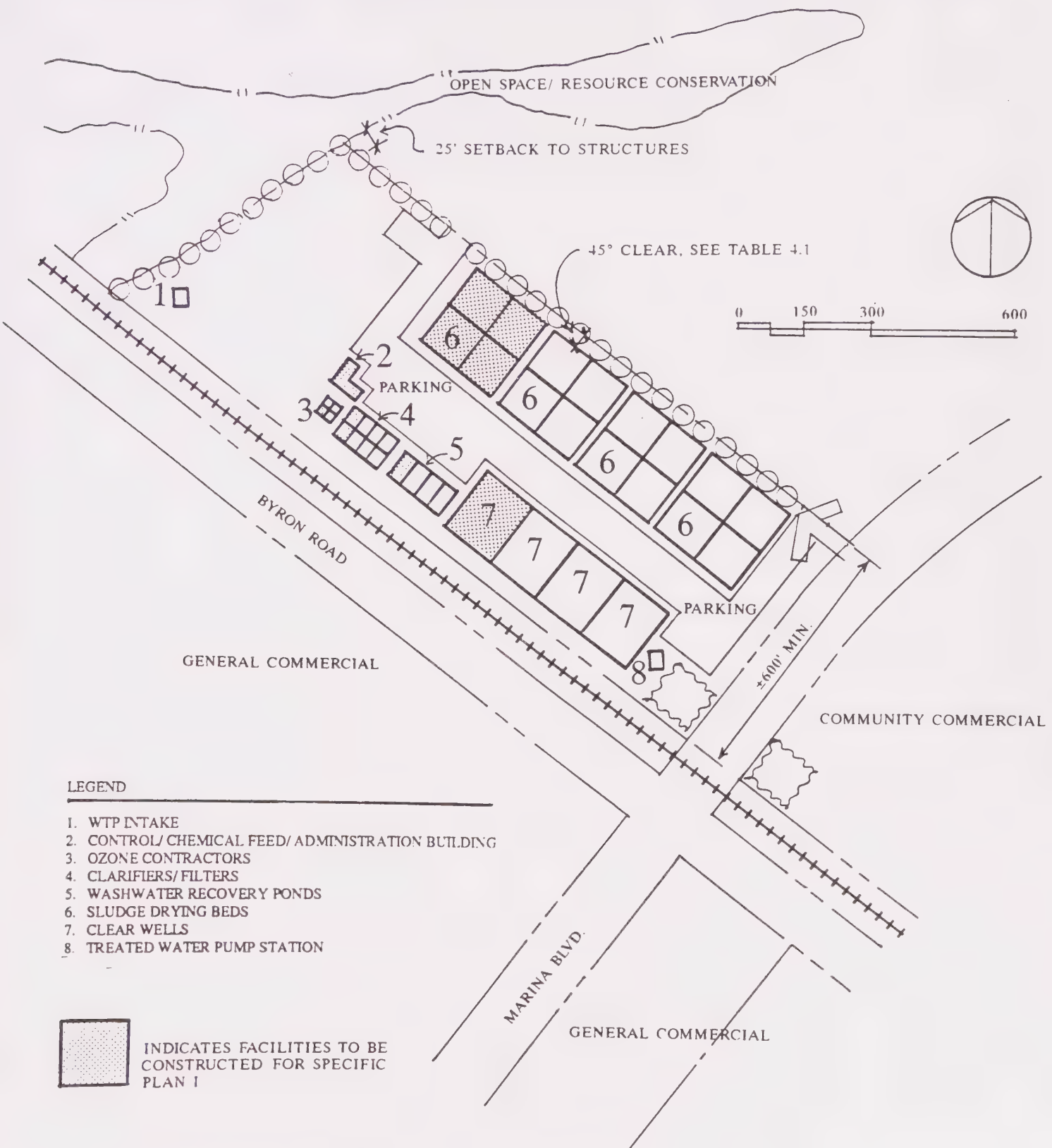
Filtration will be used to remove nonsettleable floc remaining after the water has left the sedimentation basins.

Washwater Recovery Basins

Filters are cleaned by backwashing (reversing the flow) upward through the bed.

Sludge Drying Beds

The sludge from the washwater recovery basins is then pumped to the sludge drying beds where the sludge is dried prior to disposal.



Conceptual Water Treatment Plant Site Layout

Source: Kennedy Jenks/Siegfried

Clearwell

Clearwells are used to store the treated water. Having this storage allows the treatment plant to operate at a constant flow with no "peaks" or "valleys" and it also provides for some emergency storage in case the treatment plant is temporarily shut down for maintenance or repairs.

Treatment Facilities

The total land necessary for the required structures is about 230,000 square feet, which is approximately 5.3 acres. With additional space requirements of access and parking at fifty percent structural occupancy, the minimum land requirement would be about 8 acres. The raw water storage reservoirs would require an additional 3 acres of land, therefore the total space required for the treatment plant to operate is approximately 11 acres. A conceptual site plan is shown in Figure 12.4: Conceptual Water Treatment Plant Site Layout. The selected site at the Northwest corner of Kelso Road and Byron Highway contains 18.5 acres, and reserves an extra 7.5 acres as a contingency for additional storage facilities.

- c) Visual Impacts. Treatment plant layout and modular construction shall be designed to minimize the visual impacts on adjoining land uses by maintaining as low a profile as possible and utilizing screening and landscaping.

12.3.7 Water Storage

In any water supply system, there is a certain amount of water storage, usually called operational storage, which must be provided in order to allow for efficient operation of the overall system. Also, although the water supply facilities for Mountain House will be designed to provide maximum reliability and flexibility, a situation may arise which requires that portions of the water supply system be shut down for short periods of time. During these "shut down" periods, emergency storage is required to meet the demands of the community. In the event of a fire, fire storage is also required.

If restrictions were to be placed on the ~~winter~~ water pumping rights, the community will increase its water storage capacities to handle the additional needs. Such capacities increases will not be needed until well into the community's development because the oversizing of each phase's storage has sufficient contingency to handle the potential pumping restrictions.

The location of water storage tanks within the community, if used, shall be dictated by the need to provide an acceptable water supply to the adjacent community. Therefore, the siting of water storage tanks and adjacent booster pumps stations are primarily controlled by the hydraulic needs of the water supply system. Such hydraulic needs allow some latitude in placing the facility within a portion of a neighborhood.

The sizing and locating of individual water storage facilities prior to a project's design stage is difficult for long term developments such as Mountain House. It is feasible to locate all storage at the treatment plant. Another option would be to divide the storage and place smaller tanks around the community. In both cases, pipe sizing, land availability, fire needs and economics play a major part. From 60% to 100% of the community may be served from storage at the treatment site. In the event that remote sites are to be used in the future they will need to comply with the siting criteria provided in Section 12.3.10.

Assumptions:

- a) At buildout of the Mountain House community, the amounts of storage required in million gallons are as follows:

Emergency Storage	=	Two times average day demand	=	17.6
Operational Storage	=	30 % of maximum day demand	=	5.8
Fire Storage	=	8,000 gpm for 2 hours	=	1.0

Total Storage Required at Buildout = 24.4 million gallons

- b) Initially, and for most of the community's buildout, storage will be located at the treatment plant.

Objective: To provide the Mountain House community with adequate water storage facilities to ensure efficient system operation and "back up" supply in the event of an emergency or required system shutdown.

Policies:

- a) Treated water storage facilities shall be provided to hold the required amount of operational, emergency and fire storage for the community at the various stages of development and at buildout of the community.

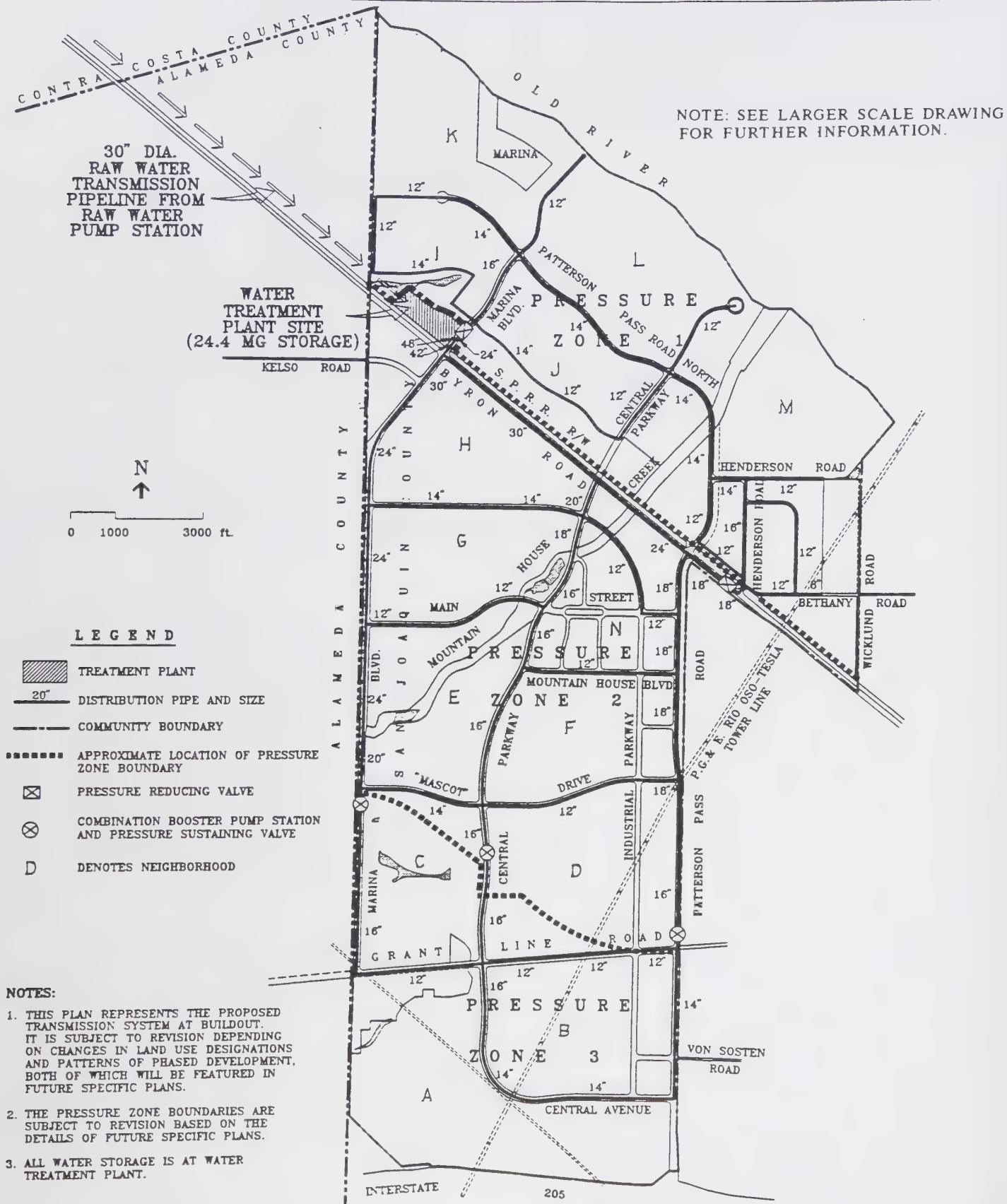
Implementation:

- a) Development Permits. Development permits shall be required for water storage facilities. The Development Permit for the initial phase of the water treatment facility shall include water storage facilities.
- b) Facilities Design. Where feasible, storage facilities shall be designed in a manner that allows for phased construction.
- c) Water Storage Permit. Prior to the submittal of any Tentative Map for any area over two miles from the water treatment plant, a Development Permit shall be required for water storage facilities. The permit application shall include an engineering study addressing the feasibility of constructing remote storage tanks. This measure applies to all development subsequent to Specific Plan I.

12.3.8 Water Distribution System

Chapter 4.30: Water Distribution System Design of the Department of Public Works Improvement Standards were used as the basis for the design detail requirements of Mountain House's water distribution system.

Figure 12.5: Water Distribution and Treatment Facilities Plan shows that the area to be served by the distribution system is limited to the Mountain House community shown in the General Plan. Figure 12.5 shows the main water transmission pipelines that have been designed to provide water service to the various neighborhoods within the service area. Figure 12.5 also shows the approximate locations of storage facilities needed to provide for peak hour and emergency source of water.



Water Distribution and Treatment Facilities Plan

Source: Siegfried Engineering Inc.

Distribution networks will be built in increments that correspond with each neighborhood, except that the initial Specific Plan will require additional connecting lines from the treatment plant to the first Specific Plan Area because they are not contiguous. At all stages of development, a loop water system will be maintained to insure compliance with fire safety provisions. All line sizing will be engineered to handle through flows from successive Specific Plans in accordance with the Master Plan. A detailed cost and phasing breakdown are provided in the PFP.

Water supply facilities shall be designed in a manner that allows for phased construction, and shall be constructed so that each phase provides appropriate treatment and adequate capacity to serve the amount of development anticipated at any given time. The capacity required for each facility to serve a particular phase of the development shall be defined in the Specific Plan for that phase of development.

Objective: To provide a reliable water distribution system that will provide optimum quality, a reasonable pressure range during maximum water demand periods, and adequate capacity to deliver water in cases of emergencies.

Policies:

- a) The water distribution system shall be designed and constructed to assure a reliable and cost-effective water supply to the community.

Implementation:

- a) Water System Design. The main water transmission pipelines shall be provided as indicated in Figure 12.5: Water Distribution and Treatment Facilities Plan.
- b) Supplemental Analyses. It is understood that Mountain House will develop in phases, and the order of phased development is not known at this time. Therefore, at each incremental phase a supplemental analysis shall be performed of the transmission system to determine the minimum amount of the facilities that will be needed to adequately serve the phase. All supplemental analysis shall be performed in conformance to the design criteria specified by County Standards and the Master Plan. The final water supply system and fire flows must meet the approval of the County Fire Warden and other agencies specified by County standards. Improvements to the proposed treatment process shall be studied as part of more detailed subsequent design.
- c) Water Demand Review. For each Specific Plan, an analysis shall be performed of the water treatment and transmission system to reaffirm the amount of facilities that will be needed, including storage, to adequately serve that particular phase. For Specific Plan I, this analysis shall be included with the Use Permit for the treatment plant. ~~take place prior to the submittal of the first Development Permit.~~

12.3.9 Sludge Disposal

The sludge produced by the Mountain House water treatment plant will contain coagulants such as alum and polymer, which are added during the treatment process to enhance solids removal; however, it will not contain toxic heavy metals or other substances in toxic concentrations.

Objective: To ensure that the disposal of water treatment plant sludges does not adversely impact the community or the surrounding environment.

Policies:

- a) Water treatment plant sludge shall be disposed of through industrial reuse, land spreading, and/or dedicated land disposal inside and in the vicinity of the Mountain House community to the maximum extent feasible in accordance with applicable regulations. Landfill disposal of sludge would be chosen only if the other alternatives were determined to be infeasible. ~~land filling, land spreading and/or dedicated land disposal in and around the Mountain House community in accordance with applicable regulations.~~
- b) Adequate sludge treatment and drying facilities shall be provided at the plant through project buildout.

Implementation:

- a) ~~Sludge Disposal Program. The Development Permit for the water treatment plant shall include a community wide program/method for sludge disposal, that will identify sludge disposal options through the buildout of the community.~~
- a) Sludge Disposal Program. The initial Development Permit for the water treatment plant shall specify the water treatment sludge reuse, disposal method(s) that will be used throughout the development of Specific Plan I. Approval of subsequent Specific Plans shall be contingent on the identification of means of water treatment sludge reuse/application/disposal consistent with applicable local, state, and federal policies and regulations, and which minimizes landfill disposal. If landfill disposal were proposed, an agreement of "will serve" letter with a landfill that would accept the sludge for at least the next five years shall be provided with the subsequent Specific Plan. If land spreading or dedicated land disposal were proposed, then guarantees of adequate acres for sludge disposal for at least the next five years must be provided. Provisions for sludge disposal shall be updated annually so that there are always firm provisions for disposal for at least five years into the future.
- b) Sludge Treatment Assessment. A detailed assessment of water sludge treatment and drying needs shall be provided in the Development Permit for the water treatment plant. the assessment shall provide the supporting calculations for determining sludge production rates, estimates on percent moisture content in raw sludge and dried sludge, application rates and design parameters for sludge drying beds, projected surface area requirements for the drying bed, and land required for sludge disposal (if appropriate).

12.3.10 Siting Criteria

The site of the water treatment plant was selected for the following reasons (see Figure 12.4 for conceptual site plan):

- To efficiently tie into raw water supply lines coming down Byron Road.
- To maintain a relatively low elevation in order to avoid the need to pump raw water up to the water treatment plant.
- To locate the water treatment plant on the west side of the community in order to avoid routing raw water lines through development areas.

- To avoid higher density residential or commercial areas.

Water treatment facilities also include booster pump stations and water storage tanks. Booster pump stations are assumed to be above-ground facilities consisting of pumps, motors, and appurtenant plumbing, including electrical panels. Such facilities normally occupy a small site and, generally, any component of the facility does not extend any higher than eight feet above the ground surface.

Objective: Water treatment facilities shall have minimal aesthetic or other impacts on surrounding areas.

Policies

- a) The water treatment plant and related facilities shall be sited, designed and landscaped to avoid negative impacts on surrounding areas, especially residential neighborhoods.
- b) Treated water storage may be located in several locations within the community if found beneficial after study and approval by the County; otherwise it shall all be located at the water treatment plant.

Implementation:

- a) Siting of Treatment Plant. The water treatment plant shall be sited to minimize noise or odor nuisances that could adversely impact adjacent land uses. Landscaping, including trees, shrubs and decorative sound walls, shall be included in order to act as a buffer between plant operations and the adjacent land uses.
- b) Structures. Structures shall be designed, if possible, to appear as buildings rather than utility structures.
- c) Pump Stations. Booster pump stations shall be located to conceal these facilities from public streets. Such facilities shall be fenced or otherwise enclosed with a masonry fence or structure in order to mitigate visual and/or noise impacts. The facility shall be landscaped and maintained in such a manner that will be compatible with the adjacent land uses.
- d) Water Storage Tanks. The preferred location for water storage tanks is in non-residential areas. In such cases, the visual qualities of the facility and site landscaping shall be compatible with that normally encountered in a non-residential atmosphere.

In the event that a water storage tank must be located within a residential area, its design shall be such as to minimize, as much as possible, the adverse visual and noise impacts on the adjacent community. The color of the storage tank shall be such as to minimize the visual impact on the adjacent land uses. Colors selected shall be generally neutral that will allow the facility to blend in with the visual character of the neighborhood. Landscaping, especially trees, shall be used to visually buffer the storage tank.

Water storage facilities shall be:

- Located at the highest available point relative to their pressure zone.
- Constructed with the lowest profile consistent with sound economical engineering practices. Tanks shall be depressed below ground level as much as possible.
- Constructed to provide for Public Safety in the event of rupture.
- Screened from view to the greatest extent possible using a combination of grading, fencing, landscaping, walls, and tank color.

12.4 REGULATORY REQUIREMENTS AND PERMITS

The Mountain House water supply system will meet all regulatory requirements set forth in Titles 17 and 22 of the California Code of Regulations, Chapter 7 of the California Health and Safety Code entitled, "California Safe Drinking Water Act" and the applicable sections of the Uniform Fire Code. To obtain the initial operating permit an application will be prepared and submitted to DHS, and a technical report will be prepared discussing the water system which includes the following:

- Detailed plans and specifications for the proposed system;
- Water quality information;
- Description of the proposed system.

The permit must be amended if there are any changes, modifications or additions to the water source or method of treatment.

In addition to the above, an approval by DWR may be required for the change in the diversion point of the raw water pump station as well as the granting of an easement to construct the station on State lands. Approvals will also be required from various owners of pipelines that will be crossed during construction.

See Chapter Seventeen: Implementation for a listing of permit requirements.

12.5 PHASING AND COSTS

12.5.1 Capital Facility Cost and Phasing

Almost \$51 million will be needed to construct the community's water system, including water supply, treatment, storage and distribution. Installation of the initial water system network, including the raw water pump station and pipeline, is the largest cost item prior to commencement of residential development; almost \$16 million is currently budgeted in or prior to the first year of construction. An alternative of constructing the pipeline in two phases will be studied in the pre-design stage.

The water treatment plant is assumed to be phased in components equal to 25% of the total facility, with one component in place at the start of each phase of development. Therefore, the first component is assumed to be in place prior to the start of residential construction. Storage tanks are assumed to be phased in three increments after the first Specific Plan. Storage ponds, pumps, and other items will be provided in smaller increments.

Provision of agricultural water supply as the community develops is addressed in Section 12.3.4: BBID Service to Interim Agricultural Operations.

12.5.2 Operations and Maintenance

Water system operations and facility maintenance will be the responsibility of the CSD. Facilities will be maintained on an ongoing basis, with maintenance activities funded from user charges on the monthly water bills paid by community residents and businesses. Maintenance personnel will be cross-trained to handle the maintenance of all water and wastewater equipment which will minimize duplication of effort and maximize cost savings. These service costs and the corresponding revenues are included in the fiscal analysis in the PFP.

12.6 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Consistency with County's Water Policy. Specific Plan II and each subsequent Specific Plan shall reevaluate the adequacy of the confirmed water supply for the remainder of the project in light of any potential or adopted restrictions on water diversion by BBID or DWR. Specific Plans shall not be approved unless it can be demonstrated that the confirmed water supply is sufficient to serve the project through buildout.
- b) Water Conservation Monitoring Program. A Water Conservation Monitoring Program shall be approved by the County prior to submittal of the first Development Permit. As part of each Specific Plan after Specific Plan I, the validity of Master Plan assumptions regarding water use shall be evaluated. If water demand exceeds that projected in the Draft Master Plan, actions shall be taken to reduce water usage. Actions could include a public information campaign, additional water conservation fixtures to be included in subsequent development, mandatory water rationing and on-site reclamation.
- c) Continuation of Agricultural Water Service. The appropriate Specific Plans shall identify how water and drainage services to the land east of the project and Patterson Pass Road within the BBID service area would be affected. They shall identify the infrastructure needed to maintain these services and when construction of these facilities would need to be completed (schedule may be expressed in terms of when certain parcels are developed).
- d) Water Demand Review. For each Specific Plan, an analysis shall be performed of the water treatment and transmission system to reaffirm the amount of facilities that will be needed, including storage, to adequately serve that particular phase. For Specific Plan I, this analysis shall be included with the Use Permit for the treatment plant. ~~take place prior to the submittal of the first Development Permit.~~
- e) Sludge Disposal Program. The initial Development Permit for the water treatment plant shall specify the water treatment sludge reuse, disposal method(s) that will be used throughout the development of Specific Plan I. Approval of subsequent Specific Plans shall be contingent on the identification of means of water treatment sludge reuse/application/disposal consistent with applicable local, state, and federal policies and regulations, and which minimizes landfill disposal. If landfill disposal were proposed, an agreement of "will serve" letter with a landfill that would accept the sludge for at least the next five years shall be provided with the subsequent Specific Plan.
- f) Phasing. The capacity required for each facility to serve a particular phase of the development shall be defined in the Specific Plan for that phase of development. Distribution networks shall be built in increments that correspond with each neighborhood, except that the initial Specific Plan shall require additional connecting lines from the treatment plant to the first Specific Plan Area because they are not contiguous.

CHAPTER THIRTEEN



WASTEWATER TREATMENT AND COLLECTION SYSTEM

CHAPTER THIRTEEN: WASTEWATER TREATMENT AND COLLECTION SYSTEM

13.1	INTRCDUCTION	1
13.2	ASSUMPTIONS	1
13.3	WASTEWATER GENERATION	1
13.4	WASTEWATER TRUNK COLLECTION SYSTEM	4
13.5	WASTEWATER TREATMENT PLANT	6
13.5.1	Wastewater Treatment Process	6
13.5.1	Plant Design and Treatment Methods	7
13.5.2	Siting Criteria	9
13.6	ODORS	14
13.7	NONRESIDENTIAL DISCHARGES	16
13.8	SLUDGE DISPOSAL	16
13.9	REQUIREMENTS AND PERMITS	18
13.10	PHASING AND COSTS	18
13.10.1	Capital Facility Cost and Phasing	18
13.10.2	Operations and Maintenance	18
13.11	SPECIFIC PLAN REQUIREMENTS	19

List of Figures

Figure 13.1: Wastewater Collection and Treatment Facilities	5
Figure 13.2 Conventional Wastewater Treatment Plan - Diagram	11
Figure 13.3 Layout of Wastewater Treatment Site	12
Figure 13.4 Wastewater Treatment and Public Use Site Area	13
Figure 13.5: Odor Impacts of the Wastewater Treatment Facility	15

List of Tables

Table 13.1: Wastewater Generation Average Daily Flow (ADF)	3
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CHAPTER THIRTEEN: WASTEWATER TREATMENT AND COLLECTION SYSTEM

13.1 INTRODUCTION

Mountain House's wastewater system will include a wastewater collection, treatment and disposal system to serve the entire community. The treatment facilities will include facultative lagoons, preliminary treatment, activated sludge treatment, primary clarification, activated sludge, disinfection, effluent storage and finally farmland irrigation.

Approximately 80% of the service area will drain by gravity through a backbone collection system to the treatment plant. The remaining 20% of the service area must be pumped to the treatment plant through lift stations and force mains.

The design capacity of the treatment facility and all related components will be 5.68 MGD at buildout. The treatment processes and facilities will be built in multiples of 1.42 MGD, the size needed for three individual neighborhoods and a balanced amount of industrial/ commercial and public uses.

Chapter Fourteen: Wastewater Reuse, provides additional information on water reclamation and reuse. Appendix 13-A: Wastewater Treatment System provides additional descriptions of the wastewater treatment system.

13.2 ASSUMPTIONS

The San Joaquin County Public Works Standards, as listed in Table 13.1: Wastewater Generation Average Daily Flow (ADF), were used to provide conceptual planning estimates for the Mountain House community. Table 13.3A in Appendix 13-A lists the basis for wastewater flow estimates.

13.3 WASTEWATER GENERATION

Table 5-1 of the San Joaquin County Public Works Standards, "Sewerage Quantities," was used to provide conceptual planning estimates for the expected sewage flows for the Mountain House development. These sewage quantities were compared to the communities of Manteca and Tracy and to the sewage flows that could be expected with the application of water conservation techniques. The basis for flow generated from residential areas is 100 gallons per capita per day (gpcd). This base factor was used in computing average daily flow (ADF) without water conservation measures. Water conservation allowances were then calculated into the base factor. Determination of specific discharge requirements will be determined by the water provider at the time of application to the provider for wastewater hookups. Compliance will be a condition of hookup.

The water conservation allowance was based on information from communities that are presently using these techniques and data available from study sources indicating the savings that have been typical with water conservation. The overall water conservation allowance is described in Chapter Twelve: Potable Water Systems, and is conservatively estimated at 14% of the conventional water usage rate.

The County standard for peaking factor has been adopted to reflect maximum flows for the wastewater facilities and include an allowance for infiltration/inflow.

Table 13.1: Wastewater Generation Average Daily Flow (ADF), illustrates the calculations of the sewage generated from the community with and without conservation for residential, commercial/industrial and school uses. The calculation of sewage generated with the use of conservation techniques is believed to be conservative and shall be verified as the community is developed. The design capacity of the treatment facilities and all related components shall be 5.68 mgd at buildout.

Implementation:

- a) Specific Plan Requirements. All Specific Plans except Specific Plan I shall include an evaluation /assessment of actual wastewater generation compared to Table 13.1: Wastewater Generation Average Daily Flow (ADF). In addition, monitoring of sewage generation figures shall be carried out by the CSD on a routine basis. Both of these evaluations shall be used to determine whether adjustments to treatment and collection facilities need to be made and how this impacts the schedule of wastewater improvements and sizing.

Table 13.1
Wastewater Generation
Average Daily Flow (ADF)

Land (Zoning)	Project Build-Out	Daily Sewage Generation Rate (1)	Cumulative Sewage Generation
RESIDENTIAL (43,515 Pop.)			
	dwelling		gallons
Very Low Density (R/VL) 3.12 persons/du	67	312 gal/du	21,528
Low Density (R/L) 3.12 persons/du	4,882	312 gal/du	1,522,560
Medium Density (R/M) 2.70 persons/du	8,232	270 gal/du	2,222,640
Medium-High Density (R/H) 2.00 persons/du	1,968	200 gal/du	393,600
High Density (R/H) 2.00 persons/du	756	200 gal/du	151,200
Town Center (M/X) 2.00 persons/du	200	200 gal/du	40,000
Subtotal, Residential	16,105	270	4,351,528
COMMERCIAL/INDUSTRIAL			
	acres		gallons
Limited Industrial (I/L)	331	1,600 gal/acre	529,600
General Industrial (I/G)	110	1,600 gal/acre	176,000
Community Commercial (CC)	88	2,000 gal/acre	176,000
Town Center (C/MU)	43	2,000 gal/acre	86,000
Neighborhood Commercial (C/N)	25	2,000 gal/acre	50,000
Freeway Commercial (C/FS)	63	2,000 gal/acre	126,000
Office Commercial (C/O)	56	2,000 gal/acre	112,000
Subtotal, Commercial	716		1,255,600
SCHOOLS			
	acres		gallons
Elem./Middle School	192	3,000 gal/acre	576,000
High School	93	4,500 gal/acre	418,500
Subtotal, Schools	285		994,500
OPEN SPACE: negligible and allowed for in other acreage estimates			
PUBLIC FACILITIES: negligible and allowed for in other acreage estimates			
TOTAL W/O CONSERVATION			6,601,628
Sewage Generation, gallons per capita per day (gpcd)			152 ³
CONSERVATION SAVINGS (2)			924,228
TOTAL WITH CONSERVATION			5,677,400
Sewage Generation, gallons per capita per day (gpcd)			130 ³

- Notes: 1. Based on San Joaquin County Public Works Standards.
2. Based on conservation savings of 14%.
3. Per capita in this case includes all land uses.

13.4 WASTEWATER TRUNK COLLECTION SYSTEM

The trunk pipeline system has been designed in accordance with provisions of Chapter 5, Sewer System Design Standards of the Department of Public Works Improvement Standards, except that wastewater generation factors are based on the volumes shown in Table 13.3A in Appendix 13-A, in lieu of the values shown in Table 5-1 of the above mentioned County Standards. The County standards were revised to account for water conservation.

The area to be served by the wastewater trunk collection system is limited to the proposed Mountain House community. Figure 13.1: Wastewater Collection and Treatment Facilities shows the wastewater trunk collection system for the community. Appendix 13-A describes the preliminary design of the system.

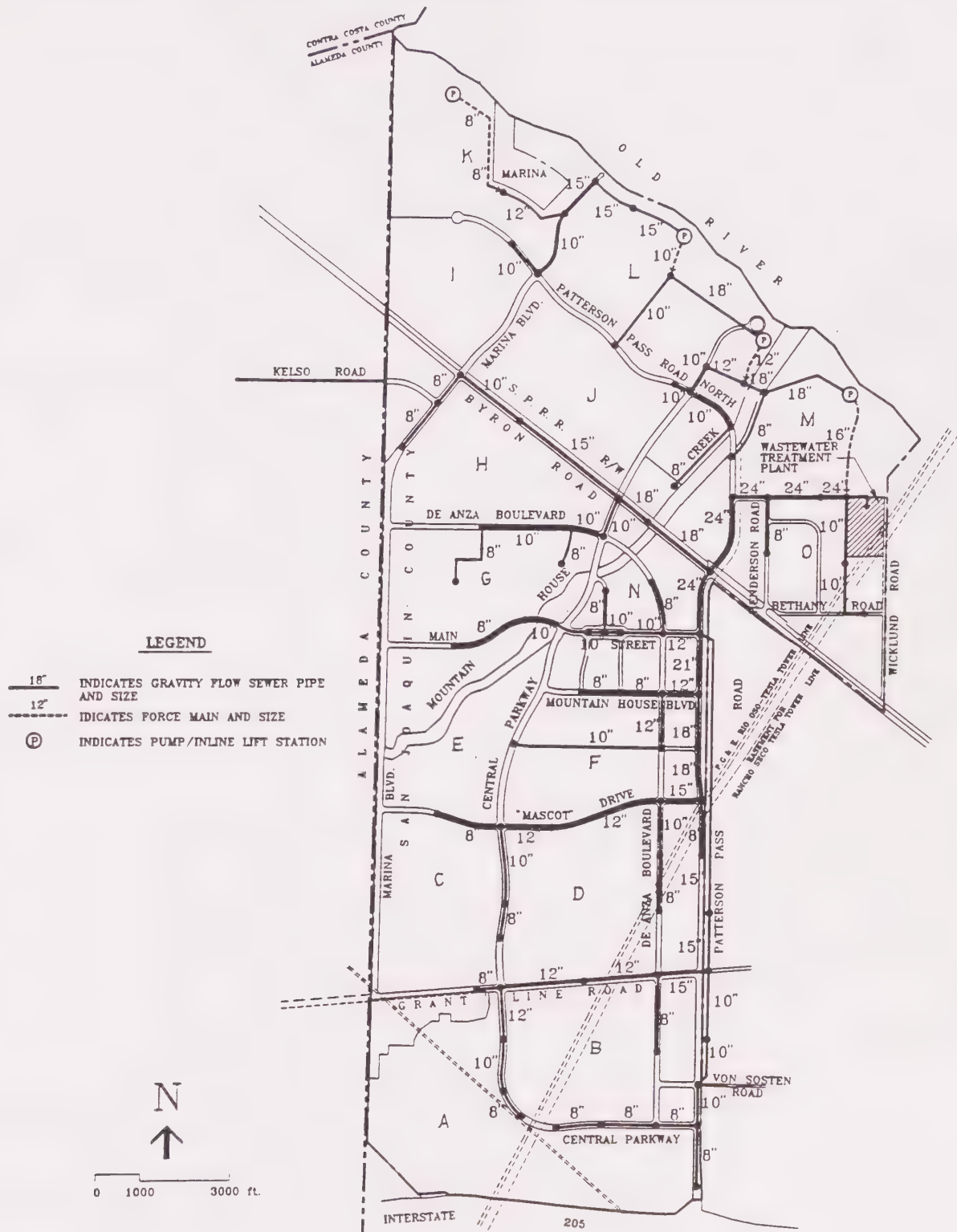
Objective: To transport wastewater from all areas within the community to the treatment plant and avoid any adverse impacts on public health and safety.

Policies:

- a) Wastewater shall be conveyed to the treatment plant through a pipe network system in a fast and efficient manner.
- b) The collection facilities shall be designed and constructed in such a manner that the health and safety of inhabitants of the community are not adversely affected.

Implementation:

- a) Design and Construction. The wastewater trunk collection system shall be installed at the size and locations shown in Figure 13.1. The detailed design and construction of the facilities shall be in accordance with current County Standards and good engineering practices.
- b) Specific Plan Requirements. Each Specific Plan shall indicate which portion of the trunk pipeline system must be installed to adequately serve the specific plan development and what additional facilities are needed to efficiently serve future "upstream" developments. In no case shall future developments be forced to install trunkline extensions through completed developments in order to secure service.
- c) Future Revisions. If in the future there are any revisions to the Land Use Plan, the wastewater generation assumptions, or County standards, a re-analysis of the trunk collection system shall be performed by the CSD and changes made to insure that the overall system design continues to meet the minimum requirements of the Master Plan and County Standards.



NOTE: SEE LARGER SCALE DRAWING FOR FURTHER INFORMATION.

Wastewater Collection and Treatment Facilities

Source: Siegfried Engineering Inc.

September 16, 1994

Chapter Thirteen: Wastewater Treatment and Collection System

13.5 WASTEWATER TREATMENT PLANT

13.5.1 Wastewater Treatment Process

This section discusses the wastewater treatment process, including the plant design, and treatment methods. Effluent disposal and reclamation is discussed in Chapter 14.

Wastewater from the early phases of the community's development will be treated in facultative lagoons, processed and stored for later disposal or reuse. It is anticipated that the facultative lagoons would not be used longer than a 25% buildout of the community. Later phases of development will utilize processes such as Activated Sludge which are more suitable for larger volumes of wastewater.

The level of treatment may vary over the buildout of the community depending on the changes in community needs, regulations and advances in treatment technology. Initially the planned treatment level is a secondary level with disinfection suitable for a regulatory approved restricted reuse on non-food crops. Advanced treatments such as tertiary treatment and de-nitrification may be required if regulatory agencies were to prohibit land disposal or farm irrigation with secondary treated water.

Treatment plant reliability is tightly controlled by a number of agencies. The Federal Environmental Protection Agency (EPA) has set regulations for secondary treatment wastewater facilities. These regulations require individual process component backup for reliability and recognize that reliability can be attained through flexibility in design and operation.

The State of California through the Department of Health Services administers California Code of Regulations Title 22 which among other topics deals with the Public Safety in the operation of treatment facilities. Other Regional Water Quality Control Agencies administer strict regulations on the discharge and reuse of wastewater effluent.

Compliance with regulatory agencies' regulations is controlled thorough a permitting process, monitoring, field testing and periodic permit renewal.

Objective: To ensure that wastewater treatment processes be selected, designed, constructed, and operated to provide adequate treatment capacity and water quality for the method(s) of disposal throughout project buildout.

Objective: To provide not only process reliability but flexibility to adapt the process to meet the needs and technology of the future.

Policy:

- a) Initial treatment processes shall be selected to meet effluent quality required for restricted use reclamation such as irrigation of agricultural lands.
- b) Treatment processes shall be selected based on the most cost-effective process that meets regulatory requirements and yields the highest amount of beneficial reuse of reclaimed wastewater.
- c) Expansion of the wastewater treatment plans shall be constructed and completed before the existing capacity has been exceeded.

Implementation:

- a) Engineering Report. The required Engineering Report shall be completed and appropriate permits obtained from the regulatory agencies.
- b) Initial Treatment. For Specific Plan I, the initial level of treatment may be secondary level treatment facultative lagoons or other higher level treatment processes approved by the regulatory agencies.
- c) Ultimate Treatment. No later than at the buildout of Specific Plan I a high volume activated sludge or equivalent treatment process shall be constructed in phases to serve all future community wastewater treatment needs. The facultative lagoons will be replaced by the new facilities. The treatment process shall provide at least secondary level treatment sufficient for surface irrigation of non-food crops.
- d) Level of Treatment. Initially, all process designs shall be sufficient to treat effluent for surface irrigation of crops and/or landscape irrigation with limited public access. Processes shall be upgraded or replaced to produce higher quality effluent suitable for other disposal methods; such other disposal methods may include irrigation with potential human contact, if on-site reclamation and discharge to Old River were implemented.
- e) Disinfection of Effluent. In all cases effluent shall be subject to disinfection before discharge or reuse.
- f) Use Permit. A Use Permit shall be required for the wastewater treatment plant. The permit application shall include a schedule for design, construction, and permitting for the plant to ensure that the wastewater treatment and reclamation facilities would be operational prior to the approval of the first Final Subdivision Map.
- g) Wastewater Flow Rate. The Use Permit application for the wastewater treatment plant shall describe a wastewater flow rate monitoring plan and specify the actions that would be taken if wastewater flow rates exceeded projections made in the Draft Master Plan.
- h) Reclaimed Water Treatment. Treatment facilities shall be laid out to accommodate additional treatment processes that would be required for reclaimed water used with potential for public contact.
- i) Open Space and Golf Course Re-use. The feasibility of using reclaimed water for irrigation of the golf course(s) and other open space areas shall be reevaluated as changes in wastewater treatment technology occur.

13.5.1—Plant Design and Treatment Methods

This section discusses the wastewater treatment plant, including aspects of plant design and treatment methods.

As described in Appendix 13-A, for the early phases of growth the wastewater is treated in facultative lagoons and stored for future use. In the middle phases of growth, a conventional activated sludge plant is built to replace the facultative lagoons.

The primary criteria for wastewater process selection is the ultimate disposal or reuse of the treated effluent. As discussed in more detail in Chapter Fourteen: Wastewater Reuse, the most acceptable option for effluent disposal is a beneficial reuse such as agricultural irrigation. The effluent quality requirements depend on the type of reclamation (reuse) planned. Effluent used to irrigate agricultural lands without potential contact by the public has less stringent requirements than reclaimed water uses with potential contact by the public.

Assumptions:

- a) — It is not cost effective to treat wastewater to the stringent effluent quality criteria required by the Inland Surface Waters Plan for discharge into Old River, if the water will eventually be pumped out of the river for use as irrigation water. Instead, the wastewater could be treated to meet the less stringent effluent quality criteria for reclamation. It is also not cost effective to treat effluent waters to potable levels for use on community landscaping if adequate raw water is available for low quality water.
- b) — Reliability criteria for the wastewater treatment plant are based on the following:
 - — Federal Environmental Protection Agency (EPA) has issued guidelines for secondary wastewater facilities. The EPA regulations basically require individual process component backup for reliability and recognize that reliability can be attained through flexibility in design and operation of the system components.
 - — State of California secondary wastewater facility guidelines in its reclaimed water regulations in California Code of Regulations Title 22, Division 4, Chapter 3. These regulations are administered by the Department of Health Services. These rules ensure that water quality criteria can be met under varying operating conditions.

Objective: To insure that wastewater treatment process selections meet the requirements of the planned method of effluent disposal and the economics of the alternative treatment methods available.

Objective: To provide flexibility and reliability for the wastewater treatment plant.

Policies:

- a) — Treatment processes shall be selected to meet the effluent quality required for restricted use reclamation such as irrigation of agricultural lands.
- b) — Process piping, equipment arrangement, and unit structures, shall provide flexibility, efficiency, safety, reliability, and convenience in operation and maintenance.

Implementation:

- a) — Interim Treatment. For Specific Plan I, the level of treatment shall be facultative lagoons.
- b) — Ultimate Treatment. The treatment to be used after Specific Plan I shall be an activated sludge plant to replace the facultative lagoon treatment.

- e) ~~Level of Treatment:~~ All process designs shall be sufficient to treat effluent for surface irrigation of crops and/or for landscape irrigation in areas with limited public access.
- d) ~~Treatment Process:~~ Subject to engineering and process considerations in the design stage, the treatment process steps shall include:
- ~~Preliminary Treatment:~~ This shall include large materials and grit screening.
 - ~~Facultative Treatment Lagoons:~~ The wastewater generated by the first three increments of the project (25% of buildout of all land uses in the Master Plan, including 4100 residential units and a corresponding balance of non-residential land uses as projected for the first Specific Plan) shall receive secondary treatment by facultative lagoons with supplemental aeration. The lagoons shall be replaced after five to seven years with a conventional treatment facility that will require less space.
 - ~~Conventional Activated Sludge Treatment:~~ Following construction of the first three increments of the project, secondary treatment shall be provided by activated sludge instead of lagoon treatment. The processes include primary clarifiers, aeration basins, secondary clarifiers, dissolved air flotation (DAF) thickeners, and anaerobic digesters. The DAF thickeners and anaerobic digesters are described in the sludge disposal section of this chapter.
 - ~~Disinfection:~~ The secondary effluent from the secondary treatment process, either facultative treatment lagoons or activated sludge, shall be disinfected prior to storage. The two alternatives to be evaluated for Mountain House are chlorination and ultraviolet light. The selection of a disinfection alternative shall be made as part of the design of the activated sludge treatment facility which is estimated to be needed in the year 2000.
 - ~~Effluent Storage Ponds:~~ These shall be provided as discussed in Chapter Fourteen: Wastewater Reuse, and Appendix 13-A.
- f) ~~Development Permit:~~ A development permit shall be required for the wastewater treatment plant.

13.5.2 Siting Criteria

The site of the wastewater treatment facilities was selected to take advantage of the topography. Wastewater from the majority of the development area can flow by gravity to the wastewater treatment facilities.

The site was also selected because it is the most isolated location from populated land uses within the community. The agricultural and open space uses east of the site (outside the project boundary) will remain. Light and general industrial uses are planned to the northwest and south.

Wastewater lift stations are necessary to convey wastewater from certain parts of the community to the wastewater treatment plant. Generally, such facilities are primarily below-ground and are not noticed by the casual public.

Figures 13.2 to 13.4 illustrate the location and layout of the wastewater treatment facility and its relationship to other public uses.

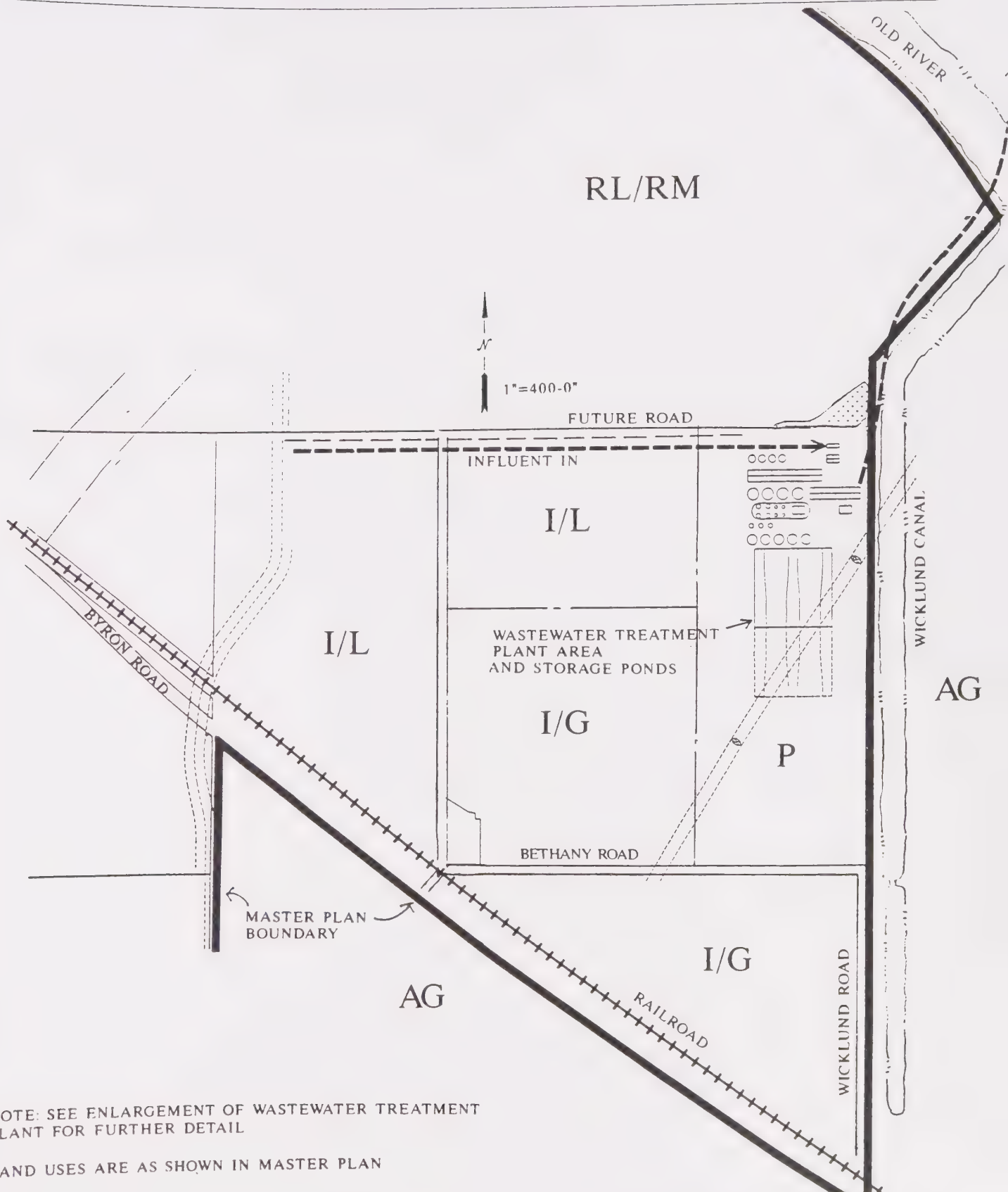
Objective: Wastewater treatment facilities shall have minimal aesthetic or visual impact on surrounding areas.

Policy:

- a) The facilities shall not appear to be a wastewater treatment plant to the casual observer.

Implementation:

- a) Location. The wastewater treatment facility shall be located in an area where the surrounding planned land uses are industrial.
- b) Siting. The wastewater treatment facility shall be sited so that the facility cannot be seen from a major arterial roadway.
- c) Undergrounding. To the degree feasible, above ground structures and elevated piping shall be minimized.
- d) Landscaping. Landscaping shall be designed to screen the perimeter of the site.
- e) Structure Design. To the degree feasible, structures shall be designed to appear as industrial buildings rather than utility structures.

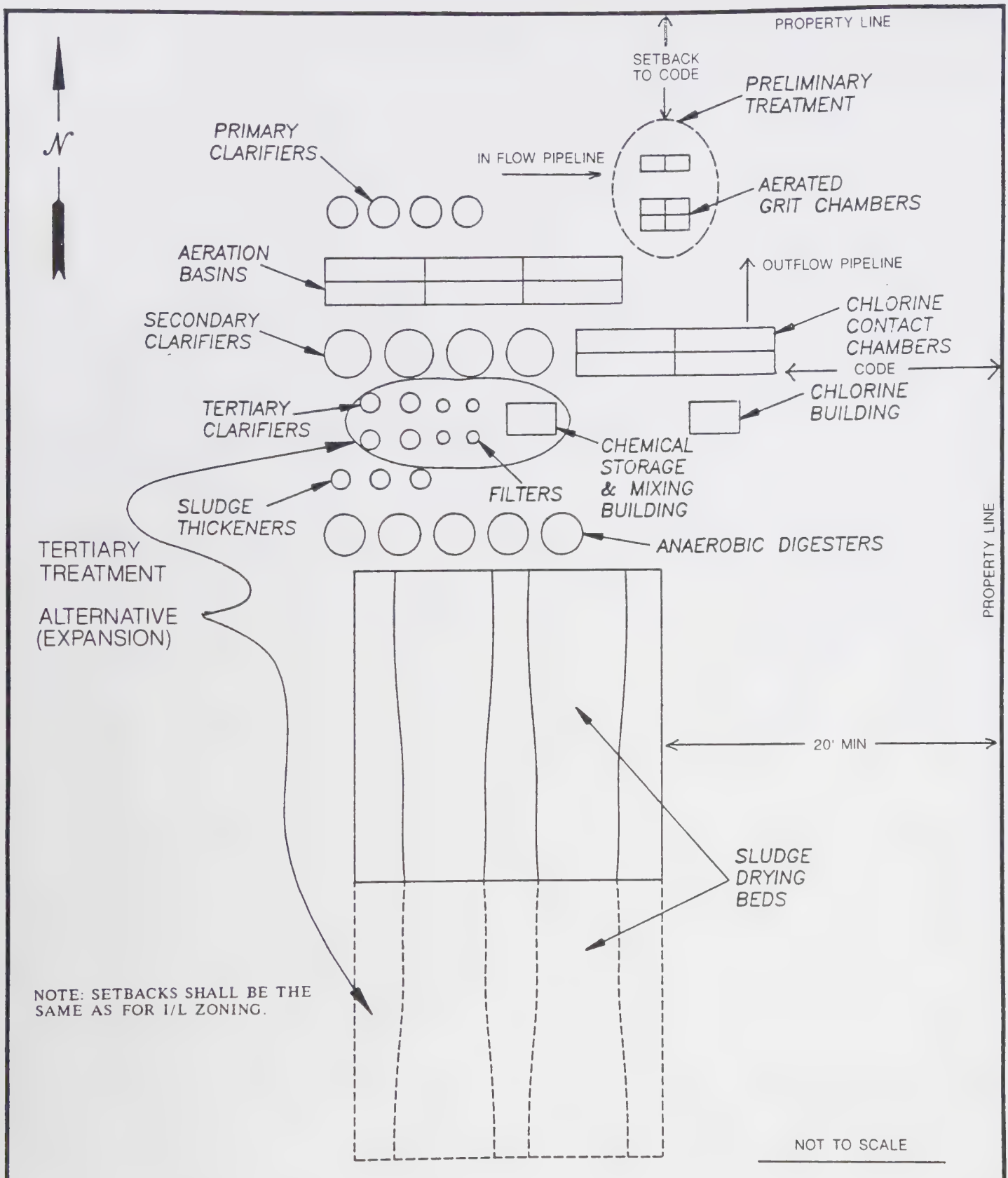


NOTE: SEE ENLARGEMENT OF WASTEWATER TREATMENT PLANT FOR FURTHER DETAIL

LAND USES ARE AS SHOWN IN MASTER PLAN

Conventional Wastewater Treatment Plant -Diagram

Source: Century West Engineering

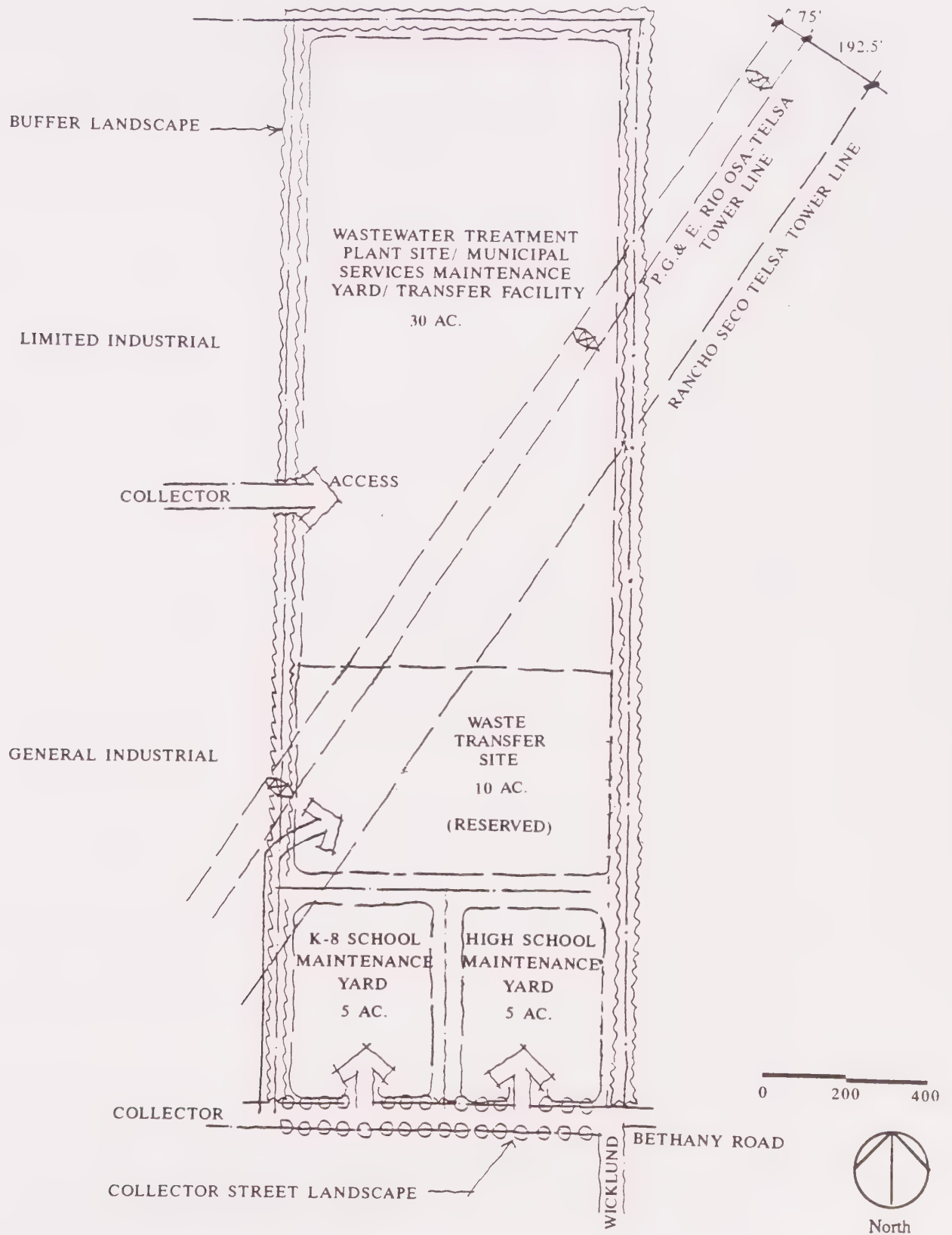


Layout of Wastewater Treatment Site

Source: Century West Engineering

September 16, 1994

Chapter Thirteen: Wastewater Treatment and Collection System



Wastewater Treatment and Public Use Site Area

Source: Century West/SWA

13.6 ODORS

In wastewater treatment plants, odors may develop from a number of sources including hydrogen sulfide and other odorous compounds, screenings and unwashed grit, scum, organically overloaded biological treatment processes, sludge thickeners, and sludge drying beds. With proper attention to design details and good housekeeping, odor development can be greatly minimized.

Figure 13.5: Odor Impacts illustrates the odor impacts expected at the wastewater treatment facility.

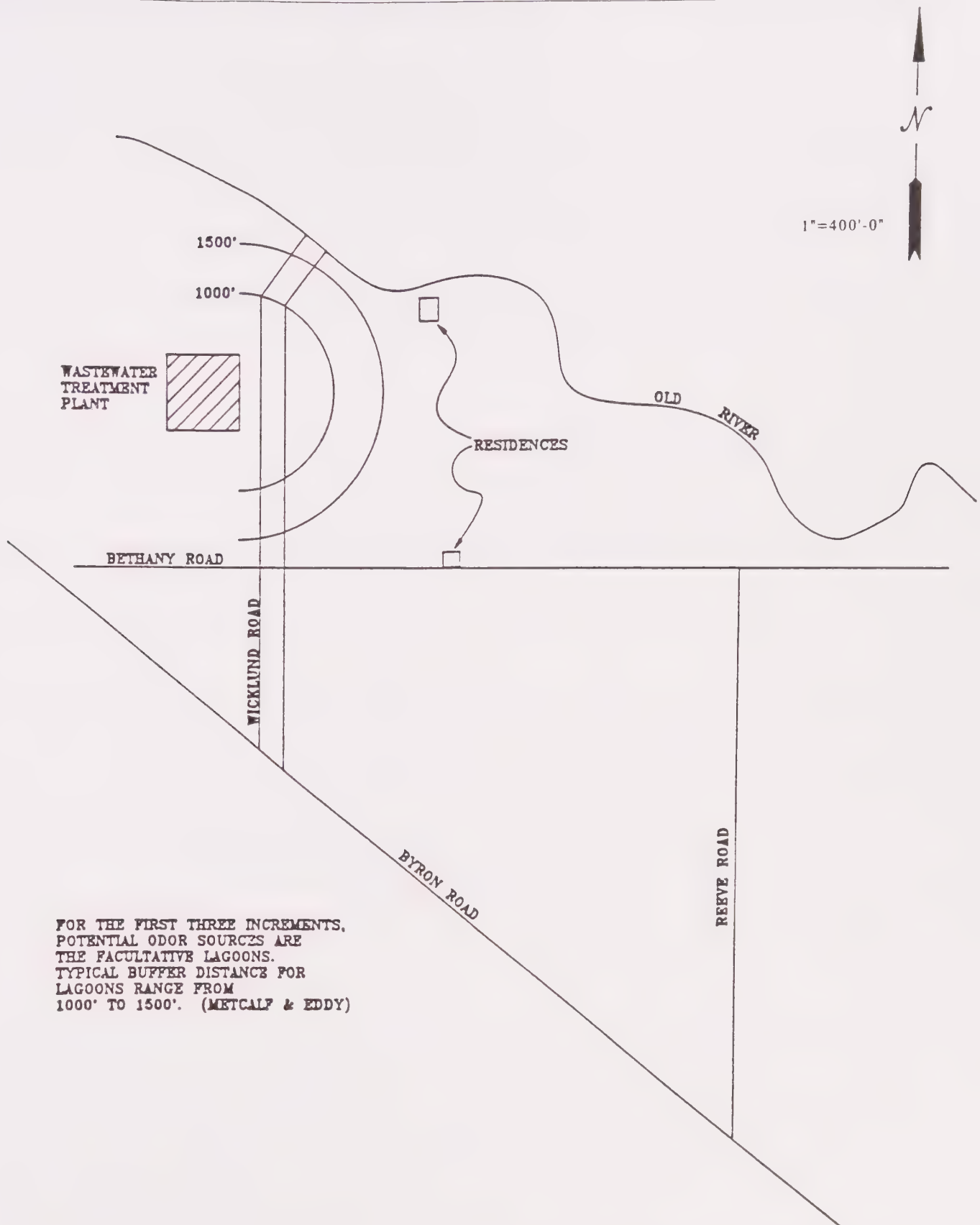
Objective: Odor from the wastewater treatment plant shall not be detectable at the boundary line of adjacent private property.

Policies:

- a) The approach taken for odor control shall include: (1) design details and good housekeeping to eliminate odor sources, (2) control of the raw wastewater discharged to the treatment plant, (3) the use of covers or chemicals if needed to control odors, and (4) selection of processes that favor odor reduction.

Implementation:

- a) Plant Design. Odor control measures shall be incorporated in the plant design. Measures shall include submerged inlets and weirs, properly sized units to maintain conservative process loading, and enclosing the principle sources of odors such as headworks, primary clarifiers and sludge thickeners. Odor treatment systems shall be provided to neutralize off-gasses collected from enclosures.
- b) Setbacks. ~~Setbacks of buildings and structures shall be the same as prescribed by the County in the G-I zoning.~~ Storage ponds and sludge basins shall be setback from property lines a minimum of 20 feet.
- c) Odor Studies. Odor studies shall be conducted to identify the type and magnitude of odor sources, meteorological conditions, dispersion characteristics and adjacent developments if odor problem develops following startup and operation of the treatment facilities.
- d) Sludge Digesters. Sludge digesters shall be operated to provide adequate volatile solids reduction and a stabilized sludge to eliminate odors that would be produced if the sludge were to continue digesting on the sludge drying beds.
- e) Monitoring. Odor production shall be monitored following plant startup. If required, unit processes such as the sludge drying beds may be covered, or chemicals may be used, to control or eliminate odors.
- f) Standards. As applied to industrial and commercial uses, control of the raw wastewater characteristics and strength at its source shall be accomplished by the adoption of discharge limits that are rigorously enforced through strong Sewer Use and Pretreatment Standards. In addition to strong standards, an aggressive public education program shall be implemented to educate the community on what may be discharged to the sewer and on waste minimization issues. Sewer use and pretreatment standards shall be developed by the CSD when potential non-standard sewer uses are proposed by individual applicants for Sewer capacity. Typically these will be special industrial users requiring pre-treatment processes.



Odor Impacts of the Wastewater Treatment Facility

Source: Century West Engineering

13.7 NONRESIDENTIAL DISCHARGES

As a general rule, if the potable supply water used by a community is acceptable for irrigation uses, then the treated wastewater generated by the community will also be of acceptable quality for irrigation. However, this is provided nonresidential waste does not significantly degrade the wastewater with trace metals, compounds associated with industrial processes or excessive salts.

Objective: To insure that raw wastewaters discharged to the treatment facilities shall not limit treated effluent disposal or reuse options.

Policies

- a) Nonresidential wastewater discharged to the treatment facilities shall have characteristics similar to residential wastewater.

Implementation:

- a) Standards. Sewer use and pretreatment standards shall be implemented to regulate wastewater discharges to the plant prior to the issuance of a building permit to a user with discharges.
- b) Discharge Permit. A permit-to-discharge shall be required for certain categories of nonresidential dischargers. The criteria for such permits shall be established prior to the issuance of a building permit for a user with non-residential type discharges.
- c) Discharge Limitations. Discharge limitations shall be established, and pretreatment shall be required of dischargers who otherwise would not meet these limits.
- d) Public Education. A public outreach and education program shall be implemented to inform dischargers of what is allowed for discharge to the sewer, and to emphasize waste minimization concepts and techniques.

13.8 SLUDGE DISPOSAL

Until the activated sludge treatment facilities are in operation, sludge will decompose in the facultative lagoons. With the startup of the activated sludge treatment facilities, sludge will need to be treated and disposed of. It is anticipated that at buildout, with secondary treatment only, total sludge generation will be 11,300 pounds of dry solids per day.

At the federal level, land disposal, surface disposal and incineration of sludge is regulated by 40 CFR Part 503. Landfilling of sludge is regulated by solid waste disposal criteria in 40 CFR Part 257.

On the state level, sludge reuse/disposal is regulated by the State Water Resources Control Board (SWRCB), the Department of Toxic Substances Control (DTSC), and the Regional Water Quality Control Board (RWQCB). Discharge of wastes to land in California is regulated by the SWRCB according to California Code of Regulations (CCR) Title 23, Division 3, Chapter 15. Chapter 15 applies to disposal of sludge in landfills and dedicated land, but does not regulate beneficial use programs such as soil amendment or composting with sludge. The "Manual of Good Practice for Landspreading of Sewage Sludge" (April 1983) provides guidelines for reuse of sludge as a soil amendment. The California Integrated Waste Management Act of 1989 (AB 939) contains several major provisions and incentives for diverting solid waste (including sludge) from landfills. The California Integrated Waste Management Board is in the process of drafting guidelines for composting with sewage sludge.

A detailed examination of federal and state sludge disposal regulations is given in Appendix 13-A.

Proper disposal alternatives cannot be identified until sludge is classified. Classification requires the assessment of the level of toxic compounds in the sludge. Once classified, a number of alternatives are available to the Mountain House community for sludge disposal. These include landfilling of sludge, land application, dedicated land disposal, and composting. However, until sludge is available to be classified, landfilling will be required. Sufficient sludge to merit classification will not be produced for at least seven years after the first home is built.

Selecting the best method of sludge disposal is based on sludge quality, regulatory constraints, implementability, environmental and public health risk, public acceptability, self-sufficiency, reliability and economics.

Objective: To provide for appropriate disposal of wastewater sludge.

Policies:

- a) Wastewater sludge shall be disposed of in the most economical and beneficial manner possible and in accordance with appropriate regulations.
- b) Sludge quality from the project shall not limit sludge reuse options. This shall be accomplished via effective pre-treatment, public education, recycling programs, and additional treatment, if necessary.

Implementation:

- a) Initial Sludge Disposal. Sludge disposal options shall be evaluated as early as possible, not later than one year after the startup of the permanent secondary treatment process, to allow for early identification of disposal options. Evaluation shall include sludge characterization, survey of potential sites where sludge may be used as a soil amendment, and assessment of viability of the compost market. ~~During the operation of the facultative lagoons, the sludge shall be allowed to break down naturally and will not require disposal.~~
- b) Initial Wastewater Sludge Disposal Plan. Within one year after the startup of the permanent secondary treatment process, the Community Service District shall submit an Initial Wastewater Sludge Disposal Plan to the County and other appropriate agencies for review and approval. The Plan shall document the sludge characterization findings, a detailed impact/benefit analysis of sludge disposal options, and a proposed sludge disposal method for the duration of the current Specific Plan.
- c) Interim Disposal. Until sludge is classified, the sludge shall be disposed of in the Foothill or another acceptable landfill. Sludge shall meet non-hazardous classification and be dried to 50% solids for disposal in a landfill.
- d) Classification. As soon as sludge is available to obtain representative samples, the sludge shall be assessed for waste classification and the alternatives of land application, dedicated land disposal and composting, shall be analyzed based on such factors as current regulations, sludge constituents, land availability, demand for compost and cost to implement.
- e) Evaluation. Sludge disposal alternatives shall be evaluated and selected at least six months before disposal is required.

- f) Sludge Disposal Program. The Development Permit for the wastewater treatment plant shall include a community-wide program/method for sludge disposal, that will identify sludge disposal options through the buildout of the community.
- g) Changes in Methods of Sludge Disposal. In all Specific Plans where wastewater treatment sludge requires disposal, the Specific Plans shall identify the proposed method(s) of sludge disposal for the duration of the plans. The CSD may subsequently adopt other sludge disposal options providing the new method(s) will achieve an equivalent or higher degree of environmental and public health protection, as determined by the County, and meets all applicable regulatory requirements. The County shall be notified of the proposed change in disposal method at least six months prior to implementation.

13.9 REQUIREMENTS AND PERMITS

The Central Valley Regional Water Quality Control Board requires a Report of Waste Discharge (ROWD) application to be filed. The ROWD must contain information on proposed treatment and disposal methods, as well as the projected effluent quality. The California Department of Health Services requires an Engineering Report to be filed.

Prior to any waste discharge or reclamation, a Waste Discharge Permit, including a provision for use of reclaimed water for irrigation, must be obtained from the Central Valley Regional Water Quality Control Board. When sludge will also be disposed of, the Waste Discharge Permit must also contain a provision for disposal of the dried sludge. A Wastewater Reclamation Permit must also be obtained from the California Department of Health Services, Office of Drinking Water.

13.10 PHASING AND COSTS

13.10.1 Capital Facility Cost and Phasing

Wastewater collection, treatment, and storage facilities are estimated to cost approximately \$32 million. Collection facilities have been designed to the extent possible to be phased in increments to correspond to the residential neighborhoods, except that the first Specific Plan will require additional connecting lines because it is not contiguous with the treatment plant. Initial treatment and storage facilities have been sized at 25% of the community's buildout. This will serve three residential neighborhoods and a corresponding balance of commercial, industrial, and other non-residential land uses. The treatment laboratory is assumed to be built at the same time that the first phases of the treatment and storage facilities are built.

The initial facultative lagoons and pumps will be sized to satisfy the demands of the first Specific Plan. They will be replaced with a higher volume treatment facility upon commencement of the second Specific Plan, and will be expandable to accommodate future development phases. All line sizing will be engineered to handle through flows from successive Specific Plans in accordance with the Master Plan. Cost and phasing assumptions are discussed in more detail in the PFP.

13.10.2 Operations and Maintenance

Wastewater facilities will be maintained by the CSD or a special district that is formed and authorized to provide this service. In the first few years, facultative oxidation ponds, which require minimal maintenance, will be used. A properly designed gravity sewer system will require only routine maintenance in the initial years. Maintenance personnel, vehicles, and equipment may be shared with other facility maintenance

responsibilities to achieve overall service staffing efficiency and cost reductions. Operation and maintenance costs are included in the fiscal analysis included in the PFP.

Certain services such as testing and maintenance may be contracted out in the early stages until on-site personnel and facilities can be provided.

13.11 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Wastewater Generation Assessment. All Specific Plans except Specific Plan I shall include an evaluation /assessment of actual wastewater generation compared to Table 13.1: Wastewater Generation Average Daily Flow (ADF). In addition, monitoring of sewage generation figures shall be carried out by the CSD on a routine basis. Both of these evaluations shall be used to determine whether adjustments to treatment and collection facilities need to be made and how this impacts the schedule of wastewater improvements and sizing.
- b) Trunk Pipeline System. Each Specific Plan shall indicate which portion of the trunk pipeline system must be installed to adequately serve the Specific Plan development and what additional facilities are needed to efficiently serve future "upstream" developments. In no case shall future developments be forced to install trunkline extensions through completed developments in order to secure service.
- e) ~~Wastewater Treatment. For Specific Plan I, the level of treatment shall be facultative lagoons. The treatment to be used after Specific Plan I shall be an activated sludge plant to replace the facultative lagoon treatment.~~
- c) Wastewater Treatment. For Specific Plan I, the initial level of treatment may be secondary level treatment facultative lagoons or other higher level treatment processes approved by the regulatory agencies. No later than at the buildout of Specific Plan I, a high volume activated sludge or equivalent treatment process shall be constructed in phases to serve all future community wastewater treatment needs. The facultative lagoons will be replaced by the new facilities. The treatment process shall provide at least secondary level treatment sufficient for surface irrigation of non-food crops.
- d) Sludge Disposal. In all Specific Plans where wastewater treatment sludge requires disposal, the Specific Plans shall identify the proposed method(s) of sludge disposal for the duration of the plans. The CSD may subsequently adopt other sludge disposal options providing the new method(s) will achieve an equivalent or higher degree of environmental and public health protection, as determined by the County, and meets all applicable regulatory requirements. The County shall be notified of the proposed change in disposal method at least six months prior to implementation.

CHAPTER FOURTEEN



WASTEWATER REUSE

CHAPTER FOURTEEN: WASTEWATER REUSE

14.1	INTRODUCTION	1
14.2	REGULATORY CONSIDERATIONS	1
14.3	EFFLUENT REUSE PLAN	1
14.4	REUSE OR DISPOSAL SITES	3
14.5	MULTIPLE USE OF RECLAMATION SITES	5
14.6	PHASING AND COSTS	6
	14.6.1 Capital Facility Cost and Phasing	6
	14.6.2 Operations and Maintenance	7
14.7	SPECIFIC PLAN REQUIREMENTS	7

List of Figures

Figure 14.1: Staged Wastewater Reuse Locations	4
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CHAPTER FOURTEEN: WASTEWATER REUSE

14.1 INTRODUCTION

This chapter describes the policies and standards for water disposal or reclamation and reuse. Important issues included farmland irrigation with effluent, treatment levels required, regulatory considerations, best beneficial use and waterway discharge.

14.2 REGULATORY CONSIDERATIONS

The State of California has directed communities to reclaim and reuse wastewater whenever feasible. Regional Water Quality Control Boards are also requiring that reclamation and reuse be given priority consideration. If land reuse is not practicable then a water course discharge may be considered.

The Mountain House community will, at buildout, generate approximately 6000 AC/Ft of treated effluent per year. This effluent is, in a future of water shortages, a valuable commodity if properly treated and beneficially reused. To this end the Mountain House community will make every effort to beneficially reuse 100% of its generated wastewater, all of which will be subject to extensive regulations and monitoring.

In any effluent reclamation plan the primary concern is Public Health. Regulatory agencies control through the permitting process both the treatment plant reclamation process and the reuse or disposal designation.

California Code of Regulations Title 23 (Waters) allows the use of reclaimed water as irrigation water under controlled conditions. Title 22, Division 4, Chapter 3, contains wastewater reclamation criteria. The California Department of Health Services issues guidelines for the reuse of reclaimed water. The Central Valley Regional Water Quality Control Board will issue a Waste Discharge permit for the disposal or reuse of effluent if the Effluent Plan meets stringent requirements.

14.3 EFFLUENT REUSE PLAN

The approved Effluent Plan must include both treatment and reuse site provisions. These are discussed below with site alternatives discussed in Section 14.4.

Objective: All wastewater from the project shall be reclaimed to the maximum extent possible by assuring that the best beneficial use of the wastewater is implemented throughout the life of the project.

Policies:

- a) To the extent allowed by regulatory agencies management practices shall consider regional benefits and potential impacts, as well as the benefits to Mountain House.
- b) The reclamation process and Effluent Plan shall maintain flexibility so that it can be adapted to the changing needs of the community and advances in technology.
- c) Facilities and operating procedures shall be designed to ensure no physical adverse effects on public health, groundwater or surface waterways from agricultural irrigation with reclaimed water.

- d) All wastewater shall be considered a valuable commodity and shall be managed accordingly.
- e) The project shall consider on-site wastewater reclamation to the maximum extent possible upon the completion of an advanced wastewater treatment plant.

Implementation:

- a) Use of Effluent. Reclamation and reuse of all generated effluent shall be practiced to the extent that is permitted by the regulatory agencies within the bounds of economic viability.
- b) Reclamation Plan. A Reclamation Plan shall be approved by the County prior to the submittal of the Use Permit for the wastewater treatment plant. The Reclamation Plan shall include an engineering report and a schedule for ensuring that the design, construction and permitting of the reclamation facilities would be completed prior to the approval of the First Tentative Map. The Reclamation Plan shall be updated and approved prior to the approval of Specific Plans subsequent to Specific Plan I.
- c) Specific Plan Requirements. With the exception of Specific Plan I, no Specific Plan shall be approved unless guarantee has been provided to the County that sufficient land to meet the required storage and disposal acreage is under the control of the plan applicant of the community, and the consent of affected planning or water supply/use jurisdictions, including affected irrigation districts and counties, has been obtained.
- d) Tailing Water System. Each reuse site shall include provisions for a tailing water return system if such a system is needed to prevent degradation of water quality on adjoining lands or water courses.
- e) Land Management. Reuse lands may be managed and farmed in coordination with a Habitat Management Plan.
- f) Pond Construction. Storage pond construction shall be accomplished by using on-site materials to the engineering and economical extent possible.
- g) Annual Testing. Annual soil and water quality testing shall be conducted to ensure that salinity and metals levels in the reclaimed water are of satisfactory levels. The results of the tests shall be used to manage the irrigation rates, select the proper crops and soil amendments for maximum crop production and public health.
- h) Pretreatment Requirements. To minimize and control metal levels, pretreatment requirements shall be implemented and enforced.
- i) Monitoring. Monitoring of effluent reuse or disposal sites, ponds and operations shall be continuously evaluated, monitored and revised as required to ensure compliance with all regulatory requirements.
- j) Treatment Levels. Reclaimed effluent shall be treated to a level suitable for reuse on non-crops such as alfalfa, silage corn or sudan grass. If treatment levels are increased then subject to regulatory approval other reuse areas such as human contact areas and river discharge may be considered.

14.4 REUSE OR DISPOSAL SITES

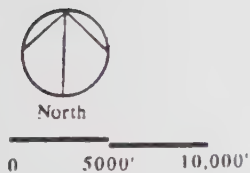
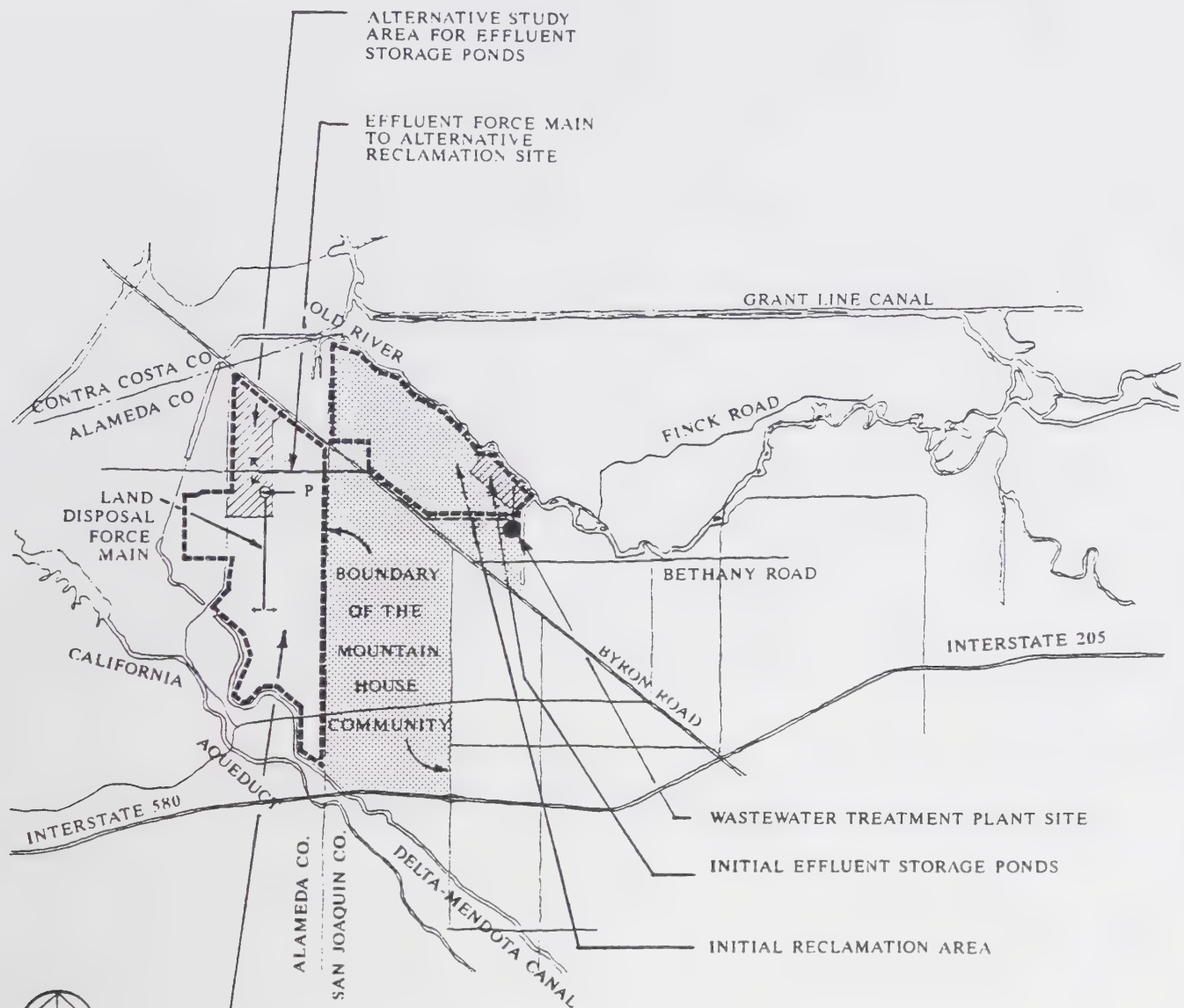
The selection of a safe and cost effective site for disposing of or reusing treated effluent is subject to many factors, including effluent treatment levels, soil quality, drainage, flooding potential, agricultural practices and crops, environmental concerns, distances from treatment plants, conveyance costs, political constraints, underground water tables, and availability of reuse land or a discharge water course. All of these factors must be considered in the evaluation of any application for disposal or land reuse. The Central Valley Regional Water Quality Control Board and the California Department of Health Services are the regulatory agencies responsible for granting an operating permit. The application procedure requires a comprehensive Engineering Report evaluating the aforementioned topics and procedures for periodic reviews as conditions change. The results of the Engineering Report and the approval by the regulatory agencies will result in an Effluent Plan that will control the disposition of the effluent for the period of the regulatory approval.

Because the buildout of the community will take place over a 20 to 40 year period and because the influencing factors change over time, it is difficult to precisely pre-determine the most acceptable disposal or reuse plan for the entire life of the community. The Engineering Report (or reports if more than one plan is being considered), using agency-required criteria and mitigation requirements of the EIR, will include a detailed analysis of alternate effluent plans. These reports will provide the basis for the regulatory agencies to approve the initial plan as well as providing the guidelines for a long-term plan.

Preliminary engineering does indicate that the plans described in the implementation measures of the section are the most viable and the most likely to be approved by the regulatory agencies. Figure 14.1 shows the locations and required acres of the two plans utilizing farm land irrigation of non-food crops.

Policies:

- a) Wastewater disposal and/or reuse along with site locations and/or discharge points shall be approved prior to the implementation of each phase of development.
- b) The community will annually evaluate and utilize the most economical reuse sites and/or disposal plans that meet public health safety conditions as approved by the regulatory agencies.
- c) The initial effluent shall be reclaimed and reused for farm irrigation on lands within the boundaries of the community, north of Byron Road.
- d) Long reuse sites shall be located off-site on nearby irrigated farm lands and may serve the dual purpose of providing wildlife habitat mitigation.
- e) Long term storage ponds for treated effluent shall be located as close to the reuse site as is economically and regulatory possible.
- f) Wastewater reuse sites may be brought into operation on an incremental basis.
- g) Any method of disposal or reuse shall be allowed if it is acceptable to the regulatory agencies.



NOTES

1. ALTERNATIVE RECLAMATION STUDY AREA WILL BE EVALUATED SHOULD INITIAL SITE BE INFEASIBLE FOR ECONOMIC OR MANAGEMENT REASONS.
2. INITIAL AREA, IF NEEDED, IS SIZED FOR USE THROUGH THE END OF THE FIRST SPECIFIC PLAN PERIOD.

USE AREA

IRRIGATION AREA

STORAGE POND AREA (AC)

ALTERNATIVE
INITIAL1,360
≤290480
≤120

Implementation:

- a) Effluent Plan. An Effluent Plan based on the Engineering Report and regulatory inputs shall be approved for each selected reuse site or disposal location.
- b) Initial Treatment. Facultative lagoons will be used initially and will be limited to service of Specific Plan I. They will produce a secondary level of treatment that, with disinfection, will be very acceptable for reuse within the ultimate boundaries of the community on non-food crop farm lands between Byron Road and Old River. Up to 290 acres for irrigation and 120 acres for winter effluent storage will be required through SPI.
- c) Replacement of Initial Treatment. Prior to the completion of Specific Plan I a large volume secondary treatment plant with disinfection will be built to replace the facultative lagoons and serve as the expansion basis for all future phases of the community.
- d) Reuse of Effluent. Reuse of treated effluent from the secondary treatment plant may continue to be used on the in-community lands north of Byron Road to serve up to 60% of the community. Up to 1,500 acres for irrigation and up to 300 acres of winter effluent storage are available within the ultimate boundaries of the community north of Byron Road.
- e) Off-Site Reuse. When development is started north of Byron Road (or sooner if found economical), appropriately treated effluent will be reused off-site on approved non-food crop farm irrigation. A typical reuse farm land site in Alameda County, immediately adjacent and west of the project, has been evaluated as a long term reuse site. Should this site be used it would require approximately 1,360 acres of irrigation land and 480 acres of winter storage ponds. A written approval from the Byron Bethany Irrigation District will be required prior to the use of these lands.
- f) Tertiary Treatment. If regulatory agencies elect to not allow farm land irrigation with secondary treated effluent then the community shall treat the wastewater to a Tertiary level for any combination of farmland irrigation, in-community reuse, Old River discharge as approved by the regulatory agencies.
- g) Other Off-Site Reuse Locations. If approved by the regulatory agencies other off-site locations for effluent reuse may be used for effluent disposal or reuse. In such cases a site specific Engineering Report will be required and additional EIR review may be necessary.
- g) Impact on Habitat. Construction of any wastewater storage ponds shall not impact any special status plant or animal species, sensitive natural communities, or wetland resources.

14.5 MULTIPLE USE OF RECLAMATION SITES

Reuse sites may serve not only as locations for the reuse of reclaimed water, but some of the land may also serve as mitigation habitat for the Swainson's hawk and other species. Chapter Seven describes a Habitat Management Plan that includes a detailed program for Swainson's hawk mitigation that is compatible with the reuse program. Regulatory and mitigation issues are covered in Chapter Seven: Recreation and Open Space. The program will include the preservation of multi-species habitat in quantities at a direct ratio to those lands taken for development. Since lands taken for development will occur over the buildout of the community, the habitat would be provided in increments corresponding to the development acres used and agreed mitigation requirements. Likewise the land needed for reuse also increases in direct proportion to the growth of the community. Thus habitat lands and reuse lands will be added in increments on an as-needed basis but not necessarily in like quantities at each step.

For the first Specific Plan, reuse may take place within the boundaries of the community. In this case, a separate off-site habitat location will be required as habitat mitigation. This off-site habitat would be maintained in a normal farming operation suitable for future reuse of reclaimed water. When the on-site reuse area is relocated, it will be relocated to the hawk habitat area previously set aside. Future expansions would then take place adjacent to the original habitat area.

Objective: To provide for the joint use of land as mitigation for Swainson's hawk and other species habitat, treated wastewater reuse, and other conservation and/or habitat when financially and environmentally feasible.

Policies:

- a) Wildlife mitigation habitat, wastewater reuse and other compatible uses shall be combined on the same lands to the maximum extent that is both biologically and economically possible.
- b) For Specific Plan I, if the on-site alternative is selected, separate reuse and habitat areas may be used until economically feasible to combine subject to the conclusion of the HMP.
- c) Agricultural and wildlife habitat lost to storage ponds outside the community shall be mitigated as described in Chapter Seven.
- d) Construction of the effluent pipeline and other structures shall not significantly impact existing wildlife habitats especially in the vicinity of Old River. Adequate precautions shall be undertaken to ensure protection of the Old River riparian wildlife habitats, levees and waterways.
- e) When not detrimental to the other objectives and policies of this chapter, effluent disposal lands shall be maintained under agricultural production and shall utilize cropping patterns and practices compatible with viable farm practices.

Implementation:

- a) Joint Use. When economically feasible or required by the need for development of the interim reuse site, the reuse site shall be combined with wildlife habitat on Fabian Tract, if approved.
- b) Multiple Use. Multiple use of farm lands for habitat, reclaimed water reuse and other programs shall be planned to allow successful economical solutions of all programs.
- c) Permanent Lands. Permanent combined wildlife habitat and reuse lands shall be provided for development of the community beyond Specific Plan I. These lands shall be provided as required and as determined in the HMP and specified in each Specific Plan (see Chapter Seven: Recreation and Open Space).

14.6 PHASING AND COSTS

14.6.1 Capital Facility Cost and Phasing

Nearly \$18 million has been included in the Mountain House cost estimates for wastewater reuse and effluent disposal facilities. The major facility components include conveyance pipelines, storage ponds, field allocation, and return water systems. Storage

lagoons are phased to correspond with neighborhood development. For Specific Plan I, all treated effluent is reused on lands adjacent to the treatment plant; then, minimal conveyance facilities and costs will be required initially. Temporary storage ponds will provide adequate capacity in the early years due to low volumes and more than ample available land with return systems in place. Therefore, permanent disposal facilities could be delayed for many years at a significant savings.

Irrigation pumps and irrigation land purchases are phased in four increments after the first Specific Plan; the main irrigation pipeline is phased in eight increments after the first Specific Plan. It is assumed that 1,800 acres of land are purchased, of which 1,500 are leased for crop production and used jointly for effluent disposal through farmland irrigation and for Swainson's Hawk habitat mitigation. The cost of the 1,800 acres is assumed to be \$7.2 million.

14.6.2 Operations and Maintenance

Wastewater reuse facilities will be maintained by the CSD or a special district formed in Mountain House that is authorized to provide this service. These costs are included in the service budget evaluated in the PFP.

14.7 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Reclamation Plan. A Reclamation Plan shall be approved by the County prior to the submittal of the Use Permit for the wastewater treatment plant. The Reclamation Plan shall include an engineering report and a schedule for ensuring that the design, construction and permitting of the reclamation facilities would be completed prior to the approval of the First Tentative Map. The Reclamation Plan shall be updated and approved prior to the approval of Specific Plans subsequent to Specific Plan I.
- a) ~~Reclamation Plan.~~ ~~The reclamation plan prepared prior to the submittal of the Development Permit for the wastewater treatment plant shall be updated prior to the approval of each subsequent Specific Plan.~~
- b) Land Requirements. With the exception of Specific Plan I, no Specific Plan shall be approved unless guarantee has been provided to the County that sufficient land to meet the required storage and disposal acreage is under the control of the plan applicant of the community, and the consent of affected planning or water supply/ use jurisdictions, including affected irrigation districts and counties, has been obtained.
- b) ~~Land Requirements.~~ ~~With the exception of Specific Plan I, no Specific Plan shall be allowed to proceed beyond its plan approval stage until it can be demonstrated that sufficient land to meet the required storage and disposal acreage is under the control of the plan applicant or the community. In the case of the first Specific Plan, this requirement must be fulfilled prior to submittal of the first Tentative Map or as specified in the Development Agreement.~~
- c) Location of Reuse and Habitat Areas. For the first Specific Plan, reuse may take place within the boundaries of the community. In this case, a separate off-site habitat location will be required as habitat mitigation. This off-site habitat would be maintained in a normal farming operation suitable for future reuse of reclaimed water. When the on-site reuse area is relocated, it will be relocated to the hawk habitat area previously set aside. Future expansions would then take place adjacent to the original habitat area. Storage ponds and irrigation areas for reclaimed effluent shall be located outside project

~~boundaries except for the first Specific Plan when the location may be on site. In this case, a separate off-site habitat location shall be required as habitat mitigation can not be provided within future development areas. This off-site habitat would be maintained in a normal farming operation suitable for future reuse of reclaimed water. When the on-site reuse area is relocated, it will be relocated to the hawk habitat area previously set aside. Future expansions would then take place adjacent to the original habitat area. Separate reuse and habitat areas shall be used until economically feasible to combine subject to the conclusion of the HMP.~~

- d) Permanent Lands. Permanent combined wildlife habitat and reuse lands shall be provided for development of the community beyond Specific Plan I. These lands shall be provided as required as determined in the HMP and specified in each Specific Plan.

14.1—INTRODUCTION

This chapter describes the policies and standards for water reclamation. Important issues include programs for land disposal and water reuse, management of the reclaimed water, and salts and metals management.

14.2—WASTEWATER REUSE PROGRAM

The State of California has directed communities to reclaim water where feasible. Therefore, 100% of the wastewater produced by the Mountain House community is planned for reclamation and reuse as irrigation water on nearby farmlands. Winter treated effluent will be stored for use during the next growing season or used for winter crops.

Provisions at Mountain House must be made for the reuse of the 5.68 mgd of treated wastewater effluent projected at buildout. Since this amount will increase from zero to the full 5.68 mgd at buildout, flexible reuse programs must include consideration of rapid and varying amount of effluent generation.

The proposed effluent reuse plan consists of pumping treated effluent to storage ponds which are then used to supply nearby farms through the farm's irrigation system. Required facilities are limited to a supply pipeline, a pump, and storage ponds. Those farms used for effluent disposal may also be used for wildlife mitigation as discussed in Chapter Seven: Recreation and Open Space.

The use of reclaimed water is an integral part of the overall plan for providing a self-contained community and is desirable from both environmental and economic perspectives.

California Code of Regulations Title 23 (Waters) allows the use of reclaimed water for irrigation water under controlled conditions. Title 22, Division 4, Chapter 3, contains wastewater reclamation criteria, and the California Department of Health Services has issued guidelines for use of reclaimed water.

The Central Valley Regional Water Quality Control Board must be contacted to obtain a Waste Discharge Permit. When sludge must be disposed of, the permit should also include provisions for disposal of sludge. In addition, the California Department of Health Services, Office of Drinking Water, must be contacted to obtain a Wastewater Reclamation Permit.

The Central Valley Regional Water Quality Control Board will require a Report of Waste Discharge (ROWD) application to be filed. The ROWD must contain information on proposed treatment and disposal methods as well as projected effluent quality. The California Department of Health Services requires an Engineering Report to be filed.

The single most important parameter in determining suitability of water for irrigation is the level of salinity. Salt is continuously added to the soil as irrigation water is applied and high salts in the soil can affect crop production. Metals present in the irrigation water can cause toxicity if the metals build up through long term irrigation practices.

Appendix 14 A: Wastewater Reclamation contains a detailed discussion of guidelines for salt and metals management.

Objectives: To manage and reuse reclaimed water for the maximum benefit of the community.

Policies:

- a) ~~Management practices for reclaimed water shall consider regional benefits and potential impacts in addition to the benefits to the Mountain House community.~~
- b) ~~The overall approach for water reclamation shall be to maintain flexibility so that application can be to as wide a range of uses as possible.~~
- e) ~~Water reclamation facilities shall be designed to ensure no adverse effects of agricultural irrigation with reclaimed water.~~

Implementation:

- a) ~~Reclamation Plan. Reclamation (reuse) of all effluent shall be practiced. A reclamation plan shall be approved prior to submittal of the Development Permit for the wastewater treatment plant. The reclamation plan shall be updated prior to the approval of each subsequent Specific Plan.~~
- b) ~~Specific Plan Requirements. With the exception of Specific Plan I, no Specific Plan shall be allowed to proceed beyond its plan approval stage until it can be demonstrated that sufficient land to meet the required storage and disposal acreage is under the control of the plan applicant or the community. In the case of the first Specific Plan, this requirement must be fulfilled prior to submittal of the first Tentative Map or as specified in the Development Agreement.~~
- c) ~~Return Irrigation Systems. Return irrigation systems shall be provided to control irrigation runoff when required.~~
- d) ~~Land Management. Some of the reuse lands may be managed and farmed in coordination with the Habitat Management Plan and other provisions set forth in this Master Plan, if the lands are utilized for joint purposes.~~
- e) ~~Ponds. Pond construction shall be accomplished using on-site materials taken from areas within the ponds that will be submerged by storage waters.~~
- f) ~~Testing. Annual soil and water testing shall be conducted to ensure that salinity and metals levels in the reclaimed water are satisfactory for reclamation purposes. The results of the tests will be used to set irrigation rates, crop selection, and soil amendment programs to provide maximum crop production in compliance with water quality requirements.~~
- g) ~~Pretreatment Requirements. To minimize and control the metals levels in the reclaimed water, pretreatment requirements shall be implemented and enforced (see Chapter Thirteen: Wastewater Treatment and Collection System) so that metals in industrial wastewaters are comparable to domestic wastewater concentrations.~~
- h) ~~Monitoring. Effluent reuse operations shall be continuously evaluated, monitored, and revised as required throughout the life of the community to ensure maximum efficiency, public safety, and conformance with all agency requirements and environmental laws. Continuous monitoring of the soil and groundwater conditions on all disposal lands and adequate maintenance of storage ponds shall occur throughout the life of the community.~~
- i) ~~Engineering Report. An Engineering Report shall be prepared, or previous reports amended, for each phase of the effluent disposal plan and submitted to the appropriate agencies including the County, for the purpose of obtaining a wastewater reclamation~~

permit for any portion of the community. Any such Engineering Report may cover a disposal study area greater than that actually needed for individual Specific Plans, but at a minimum it should cover enough acreage to meet the needs of the proposed development.

14.3—BEST BENEFICIAL USE

The most beneficial use of reclaimed water at Mountain House is for agricultural irrigation applications. Reclaimed water as proposed for treatment is not a direct substitution for potable water. Therefore, reclaimed water is not included within the demand for potable water within the community.

The most feasible or best beneficial use of reclaimed water may vary over the life of the project. An alternative to farm irrigation is a dual water systems for water reuse within the community. As of 1993, a dual water system would be prohibitively expensive and would reuse less than half of the available reclaimed water, thereby also requiring a supplementary method of disposal. However, a dual water system could be used in parts of the community if required or found economically feasible.

Objective: To reuse treated effluent for the best beneficial use.

Policies:

- a) All reclaimed water shall be considered to be a valuable asset and shall be managed and reused for its best beneficial use.

Implementation:

- a) Crop Uses. Reclaimed water shall be delivered for reuse on a variety of crops, including non-human consumption crops such as alfalfa, silage corn, or Sudan grass. The selection of crops will vary from year to year as market conditions, crop rotation needs, and economics change.

14.4—SELECTION OF REUSE SITES

The selection of an effluent storage and disposal site for the Mountain House community is subject to many factors, including effluent treatment levels, soil quality, drainage, flooding potential, agricultural products, environmental concerns, distances from treatment plant, conveyance costs, political constraints and availability of land. Many of these factors must be considered, evaluated and approved by the Central Valley Regional Water Quality Control Board and the California Department of Health Services before a Wastewater Reclamation Permit can be issued. The application procedure requires a comprehensive Engineering Report that must evaluate the above topics.

Because of the large number of factors influencing site selection, the three sites described below have been evaluated (in the EIR) for both winter storage of effluent and land disposal to assure that the site selected provides for the best beneficial use of the reclaimed effluent, maximizes public safety, provides cost effectiveness, and minimizes impacts on the environment to a level of insignificance. The results of the EIR evaluation is required to be submitted with the Engineering Report when submitted to the above referenced agencies for permit approval.

The three sites are depicted in Figure 14.1: Alternative Wastewater Reuse Locations. The sites are described as follows:

1. Primary Permanent Alternative: Lands immediately north of Old River on Fabian Tract.

- The study of this site covers up to 4,550 acres of land. The added study acreage will ensure adequate land availability and maximum environmental sensitivity for specific storage and disposal location selection. Estimated irrigation land requirements is 1,590 acres. Estimated pond requirement is 200 to 300 acres depending on the final depth of the ponds.
 - Effluent conveyance would run from the treatment plant north along the west edge of Wicklund Canal and east of the small wetlands area, to the vicinity of Old River where it will turn westward and run parallel to the river. It will be constructed at least 10 feet off the toe of the present levee and only farm fields will be disturbed. At a point to be determined by detailed engineering, the pipeline will turn north and pass under Old River and follow the shortest route to Finch Road. It will then follow the road until reaching the inlet structure of the storage pond at a location to be determined after full engineering review. The river crossing will consist of directional drilling under the Old River such that neither the levees or adjacent natural habitat will be disturbed.
2. ~~Secondary Permanent Alternative: Lands located in Alameda County immediately west of the community.~~
- An estimated 1,360 acres of irrigation lands will be needed along with 480 acres of storage ponds, a total of 1,840 acres. The Alameda County alternative will require more acres for pond because, as indicated by preliminary engineering, topography will make deeper ponds less cost effective. The acreages of required irrigation lands are likely different for similar reasons.
 - The effluent conveyance pipeline would run westward to the railroad tracks, northwesterly to Kelso Road and then west along Kelso Road to the storage ponds. Because the Alameda lands have a greater slope at the southern end, the storage ponds are designated for the northern area. This will require a lift station to move the water to various crossing canals and ditches as required for irrigation. The route of the pipeline avoids all wetlands and wildlife habitat.
 - A written approval from BBID will be required prior to the use of lands in Alameda County for treated wastewater.
3. ~~Interim Alternative: Lands within the community located immediately north of Byron Road.~~
- This site is being considered for interim use only during Specific Plan I. Although as much as 1,500 acres is available in this area, it is estimated that a total of 410 acres (290 acres irrigation and 120 acres of ponds) will be required. Minimal capital improvements would be required as the reuse area is immediately adjacent to the treatment plant and facultative lagoons, and already has a system of irrigation ditches to handle the water deliveries.

Objective: To provide for flexible, economical and environmentally sound locations for effluent use.

Policies:

- a) ~~Storage ponds and irrigation areas for reclaimed effluent shall be located outside project boundaries except for the first Specific Plan when the location may be on-site.~~
- b) ~~The primary permanent reclamation site shall be located across Old River from the project site, on what is known as the "Fabian Tract".~~

- e) ~~An alternative permanent reclamation site shall be located in Alameda County, adjacent to the west boundary of the project site.~~
- d) ~~Adequate effluent disposal land shall be available prior to the implementation of each phase of development.~~
- e) ~~Wastewater reclamation sites shall be brought into operation on an incremental basis as the community develops and shall be located contiguously whenever possible.~~

Implementation:

- a) ~~Evaluation of Suitability. The following factors shall be used for evaluation of all sites:~~
 - ~~Proximity to wastewater treatment facilities.~~
 - ~~Relatively flat topography to minimize pumping costs.~~
 - ~~Quantity of farm land.~~
 - ~~Existing farm structures and farming with irrigation and drainage systems already in place.~~
 - ~~Soil conditions.~~
 - ~~Groundwater depths.~~
 - ~~Avoidance of well sites.~~
 - ~~Deep drainage system tied to the Delta to control the groundwater levels.~~
 - ~~Impacts on Old River.~~
 - ~~Cost of conveyance pipeline.~~
 - ~~Impacts on other agencies, districts or jurisdictions.~~
- b) ~~Fabian Tract. The Fabian Tract site shall be evaluated for use as the primary permanent reclamation site, and shall be utilized if found more suitable than other alternatives.~~
- e) ~~Interim Alternative. The interim on-site alternative shall be used only if it is found to be economically and environmentally superior to the other alternatives, and then only until needed for development.~~
- d) ~~Permanent Location. If the interim on-site location is used, the reuse location shall be moved to a permanent location when the initial lands are needed for development.~~
- e) ~~Alameda Site. Should the primary permanent site fail to qualify for selection, then the Alameda County site shall be selected.~~
- f) ~~Other Sites. Other sites may be evaluated and selected should they become available and if they can be proven to be superior to the original site.~~

CHAPTER FIFTEEN



STORM DRAINAGE AND FLOOD PROTECTION

CHAPTER FIFTEEN: STORM DRAINAGE AND FLOOD PROTECTION

15.1	INTRODUCTION	1
15.2	ANALYSIS AND DESIGN CRITERIA	1
15.3	OFF-SITE WATERSHEDS	1
15.4	PRIMARY STORM DRAIN COLLECTION SYSTEM	4
15.5	SECONDARY STORM DRAIN COLLECTION SYSTEM	7
15.6	MOUNTAIN HOUSE CREEK IMPROVEMENTS	7
15.7	BEST MANAGEMENT PRACTICES (BMP'S)	15
15.8	FLOOD PROTECTION	16
15.9	SITING CRITERIA	22
15.10	REGULATORY PERMITS	22
15.10.1	Corps of Engineers	22
15.10.2	California Department of Fish & Game	22
15.10.3	Central Valley Regional Water Quality Control Board	23
15.10.4	Central Valley RWQCB/NPDES General Permit	23
15.11	PHASING AND COSTS	23
15.11.1	Capital Facility Cost and Phasing	23
15.11.2	Operations and Maintenance	24
15.12	SPECIFIC PLAN REQUIREMENTS	24

List of Figures

Figure 15.1: Off-Site Drainage Areas	2
Figure 15.2: Storm Drain Master Plan	6
Figure 15.3: Mountain House Creek (Off-Site) - Plan	8
Figure 15.4: Mountain House Creek-Plan	9
Figure 15.5: Mountain House Creek-Plan	10
Figure 15.6: Typical Creek-Cross Sections	11
Figure 15.7: Existing Flood Hazard Zones	18
Figure 15.8: Flood Protection Plan	19
Figure 15.9: Potential Sources of Flooding	20
Figure 15.10: Typical Flood Protection Levee Cross-Section	21

List of Tables

Table 15.1: Off-Site Watersheds - 100 Year Flow Rates	3
Table 15.2: Preliminary Design Flows for Mountain House Creek	7

CHAPTER FIFTEEN: STORM DRAINAGE AND FLOOD PROTECTION

15.1 INTRODUCTION

This chapter describes the community's storm drain collection system, including off-site watershed, primary storm drain facilities, secondary storm drain facilities, Mountain House Creek, BMP treatment, flood protection, and phasing of the storm drain collection system.

15.2 ANALYSIS AND DESIGN CRITERIA

The analysis and preliminary design of the storm drain collection system are based on the San Joaquin County Improvement Standards and the Municipal and Industrial/Commercial California Storm Water Best Management Practice Handbooks. The watershed and primary storm drain facilities are analyzed using the United States Army Corps of Engineers rainfall/runoff model HEC-1.

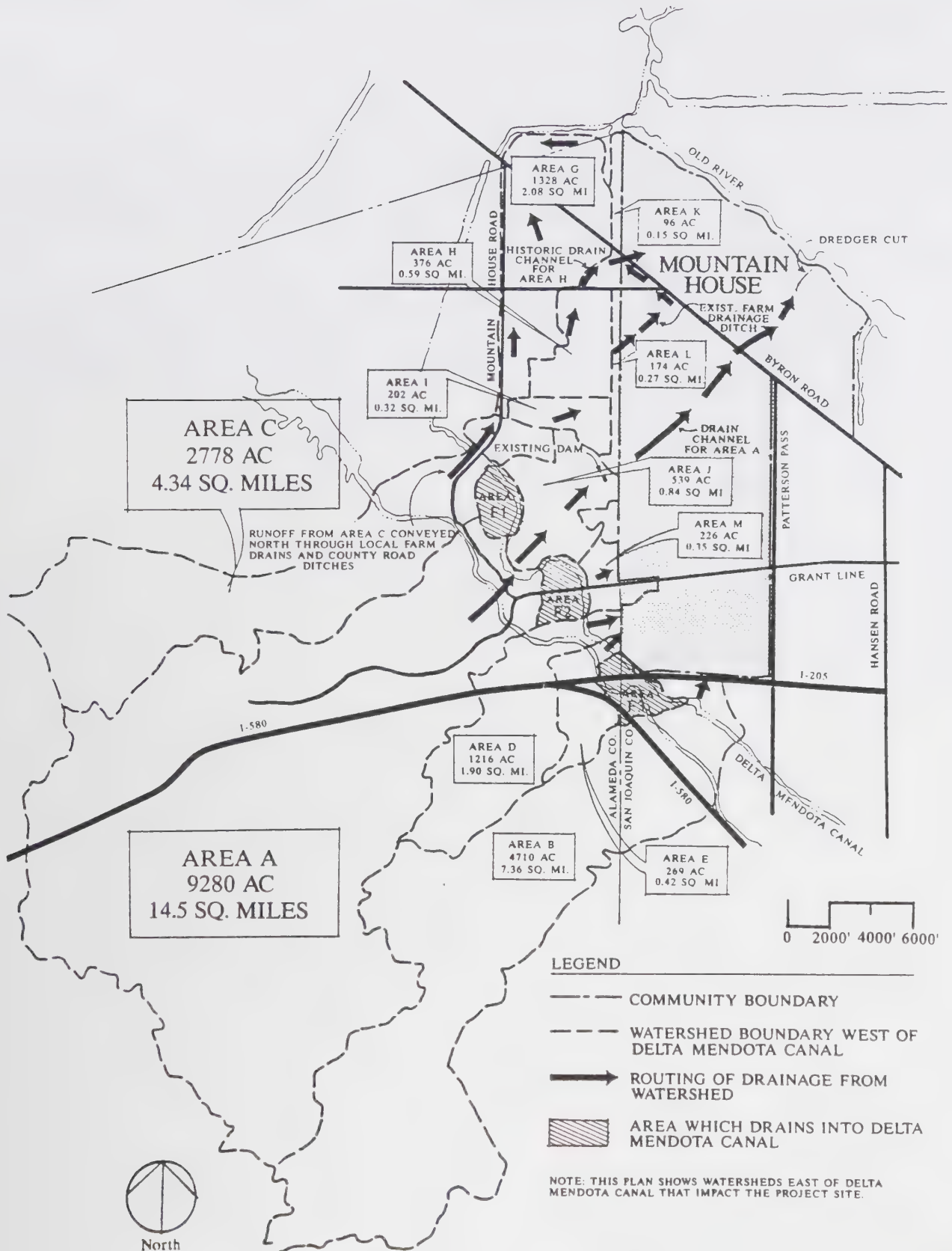
Appendix 15-A: Storm Drainage Criteria provides additional information.

15.3 OFF-SITE WATERSHEDS

To the southwest of Mountain House are several watersheds which drain through the community. These watersheds vary in size from less than one square mile to more than fourteen square miles. Boundaries of the off-site watersheds are depicted in Figure 15.1: Off-Site Drainage Areas, which gives each watershed a letter designation. The arrows shown on Figure 15.1 depict the general routing and entrance point to the community. All discussions regarding conveyance systems relate to on-site facilities.

Runoff generated in the watersheds is seasonal and occurs primarily due to precipitation occurring during the late fall, winter and early spring months. Base flow is negligible in these watersheds and occurs as a result of springs located in the Altamont Hills and/or as a result of water leaking from the California Aqueduct and the Delta-Mendota Canal. Off-site drainage courses will remain as is and are not expected to change because of the long term growth limitations on the watershed areas. Patterson Pass Business Park is located on high ground relative to off-site drainage and will require no improvements to drainage courses.

A runoff analysis has been conducted for each of the watersheds in order to determine potential impacts on the project site. A summary of the larger watersheds and their estimated 100-year flow rates at the community boundaries are presented in Table 15.1. A summary of each watershed is included in Appendix 15-B: Description of Mountain House Watersheds. These assumptions provide the basis for the storm system design.



Source: Siegfried Engineering Inc.

Off-Site Drainage Areas

September 16, 1994

Chapter Fifteen: Storm Drainage and Flood Protection

**Table 15.1:
Off-Site Watersheds - 100 Year Flow Rates**

Watershed Designation	Watershed Area sq. miles	Flow Rate (Cubic Feet Per Second)
A (Mountain House Creek)	14.50	1,240
B (Patterson Run Creek)*	7.36	530
C (Dry Creek)*	4.34	730
D *	1.90	140
E *	0.42	80

12/2/93

* Preliminary estimate, further study required. Of the above watersheds, only A (Mountain House Creek) has any material impact on the initial phases of development.

Objective: To insure that drainage from off-site watersheds is considered in the design of the community storm system and is safely conveyed through the community.

Policies:

- a) Adequate storm transport systems shall be provided to insure that all off-site drainage from watersheds shall be safely conveyed to terminal drains.
- b) Off-site drainage may be merged with urban runoff as a means of conveyance to terminal drains providing that the urban runoff has been treated according to Best Management Practices (BMP) as provided for by applicable water quality control regulations.
- c) The design for the levee improvements shall consider and mitigate the potential causes of erosion, including boat wakes. Possible design components for the prevention of erosion could include rock revetment structures, such as riprap. The erosion controls shall, to the extent possible, be designed to provide protection of existing riparian vegetation. Specific design components for erosion abatement shall be required as a condition of levee design approval.
- d) Boat speed limits to reduce the generation of potentially damaging boat wakes shall be established and enforced by the San Joaquin County Sheriff's Department, Boating Safety Division, in conjunction with other Delta area law enforcement agencies.

Implementation:

- a) Streambed Protection. Erosion shall be minimized by using appropriate streambed protection energy dissipators at transitions from supercritical to subcritical flow, at the confluence of channels, at the downstream location of culverts, and at channel transitions. Streambed protection shall be provided by planting appropriate species of plants. Streambed is defined in this application as the constructed floodplains and channels and does not include existing creekbeds that will not be disturbed.

- b) Specific Plan Requirements. Detailed studies for each watershed area shall be prepared and utilized in the design of each segment of storm facilities required for each Specific Plan, and shall be completed and approved prior to the approval of Specific Plans. For Specific Plan I, these studies shall be approved prior to submittal of the first Development Permit.
- c) Phasing of Improvements. Each segment of the storm drainage system shall be designed as needed to provide protection for each phase of development.

15.4 PRIMARY STORM DRAIN COLLECTION SYSTEM

The primary storm drainage systems provides for the conveyance of all off-site and on-site precipitation, plus any urban runoff, to the Old River as a terminal drain. The primary storm drain collection system includes trunk storm drain pipes (72 inch and larger), major open-channels, and detention basins. The layout of the collection system is shown in Figure 15.2: Storm Drain Master Plan. Best Management Practice (BMP) treatment processes referred to in this section are discussed in a following section.

As shown in Figure 15.2, the community is divided into a number of urban drainage areas which drain to trunklines, open channels, and detention/treatment facilities. Internal drainage boundaries are approximate and may change as the community develops. The trunk lines and channels are sized assuming that flood control storage is not available, except in the golf course areas. In the golf course area at the last half of the Master Plan buildout, it is anticipated that a series of interconnected water features will serve as treatment BMP's. Depressed fairways and water features within the golf courses may be designed as detention basins available for infrequent inundation as a flood control measure. Community drainage patterns are based on existing topography and anticipated grading and are shown in Figure 15.2.

Objective: To insure that on-site and off-site drainage generated by precipitation and urban runoff are jointly considered and are conveyed safely through the community.

Objective: To insure that on-site drainage will not impact property owners adjacent or within the community, or downstream property owners.

Objective: To minimize the discharge of sediment to creeks, ditches and Old River.

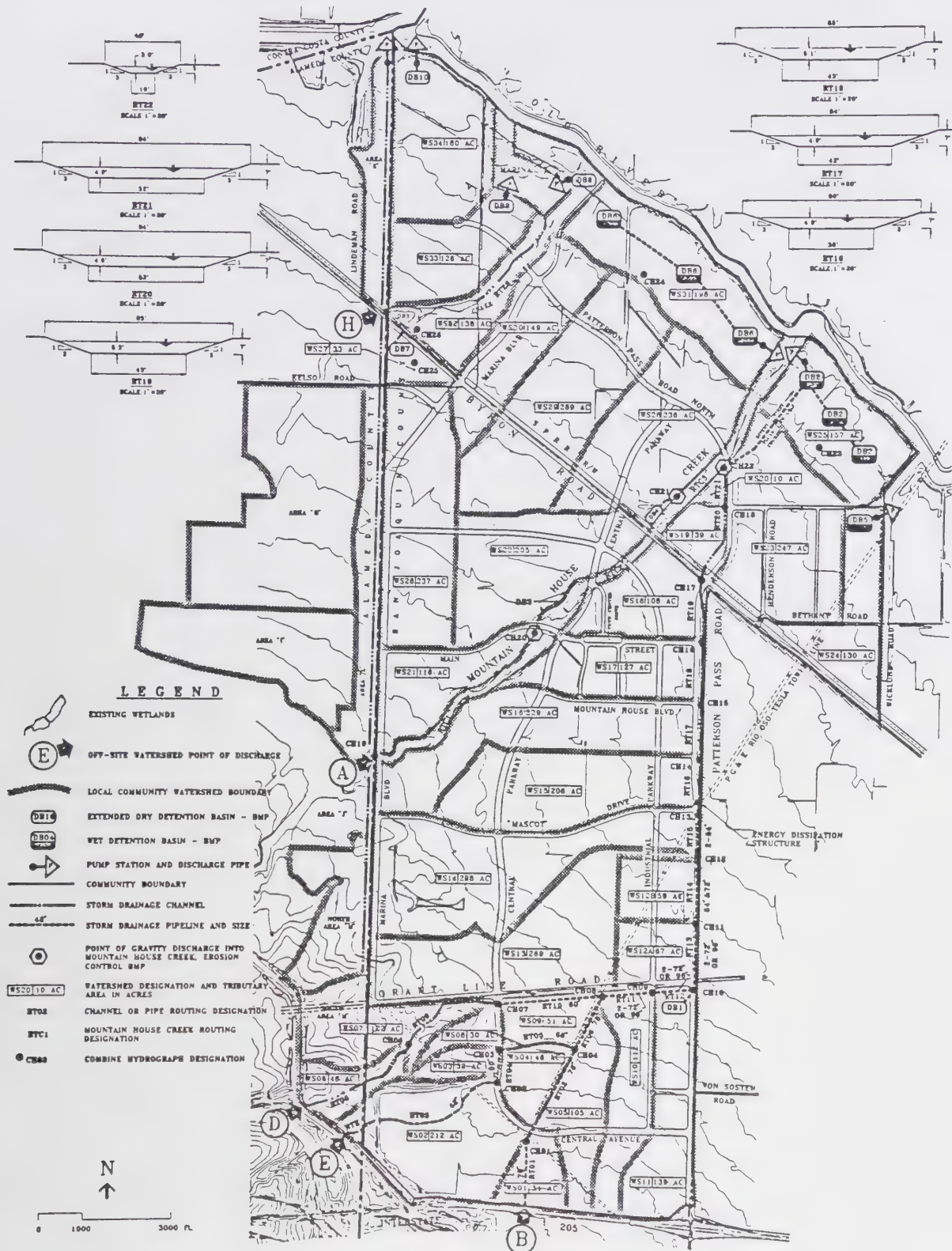
Policies:

- a) Pipes and/or open-channels shall be designed with 100-year flood capacity to a point of terminal discharge.
- b) Open-channels shall be designed to minimize erosion.
- c) Sediment generated by grading or construction activities shall be subject to BMP's prior to discharge to creeks, ditches and Old River.
- d) Trunk line pipes (72 inch and larger), detention basins, and major open-channels shall be designed and constructed to transport the 100-year volumetric flow rate.
- e) Trunk line pipes shall be designed for gravity flow conditions.
- f) Open-channels shall be designed and constructed to meet the most conservative freeboard requirements of Federal, State, or County standards.

- g) Erosion shall be minimized by designing and constructing open-channels to convey storm water runoff at or below the allowable maximum velocity.
- h) Erosion shall be minimized by using appropriate streambed protection and/or energy dissipators at transitions from supercritical to subcritical flow, at the confluence of channels, at the downstream location of culverts, and at channel transitions. Streambed protection shall include appropriate species of plants.
- i) The ultimate point of terminal discharge for all drainage shall be Old River. Future flows shall be metered to pre development rates.
- j) The location and design of detention ponds shall provide for adequate access to the basins for maintenance.

Implementation:

- a) Inlet Structures. The inlet structure of detention ponds shall be designed and constructed to reduce the velocity of the incoming water to levels that minimize erosion.
- b) Inflow Channels. The inflow channel for a dry detention basin shall be designed and constructed to prevent erosion, which may include but not be limited to a concrete low-flow channel or riprap. The inflow channel shall continue to the outlet of a dry detention basin or to the edge of a lower stage of the basin which is always submerged.
- c) Detention Pond Design. For Specific Plan I, the preliminary locations and capacities of detention ponds within the Specific Plan I Area shall be determined prior to submittal of the first development permit. Each subsequent Specific Plan shall include the preliminary locations and capacities of detention ponds within the Specific Plan boundaries.
- d) Terminal Discharge. Terminal discharge may occur by either gravity flow and/or pumped flow.





15.5 SECONDARY STORM DRAIN COLLECTION SYSTEM

The secondary storm drain collection system is primarily located within the local and collector streets of the community. However, a number of secondary systems serve the major arterials, parks and other areas. The secondary storm drain collection system consists of gutters, local drain swales, minor channels, catch basins, catch basin laterals and underground pipes. These facilities transport on-site drainage to trunk lines, detention basins, retention basins or terminal drains.

Objective: To insure that on-site drainage occurring over the community be safely conveyed by the secondary storm drain collection system to the primary storm drain collection system.

Policies:

- a) The secondary storm drain collection system shall be used to collect and convey on-site drainage to the primary storm system safely with adequate flood protection.
- b) The design and construction of the secondary storm drain collection system shall be based on the 10-year storm event.

Implementation:

- a) Final Designs. Each final design of a secondary storm drain collection system shall be based on the design standards of the County and other sound engineering practices.

15.6 MOUNTAIN HOUSE CREEK IMPROVEMENTS

Mountain House Creek will require improvements for flood control, wetland preservation and erosion control. A plan view of the Mountain House Creek area is shown in Figures 15.3, 15.4 and 15.5. Figure 15.6 shows typical channel cross-sections. Discharge points of lateral inflow along the creek are shown in these figures. Preliminary design flows for various reaches of the creek are presented in Table 15.2.

Section 7.2: Parks and Recreation, contains additional provisions relating to Mountain House Creek. Section 9.8: Bicycle and Pedestrian Facilities, addresses standards for pedestrian paths along the creek.

Table 15.2: Preliminary Design Flows for Mountain House Creek			
Designated Reach of Mountain House Creek (cf. Figure 19.2)			Discharge * Cubic Feet per Second
A	CH19 to	CH20	1,370
B	CH20 to	CH21	1,380
C	CH21 to	CH22	1,400
D	CH22 to	Old River	2,200

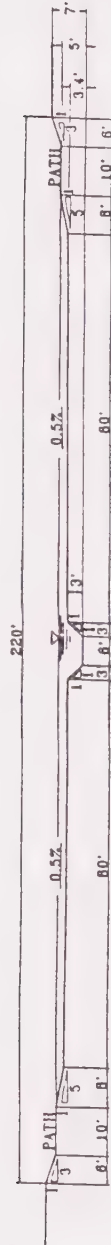
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* Based on 100-year, 24-hour storm event.





MOUNTAIN HOUSE CREEK



SECTION A-A

SCALE: 1" = 20'

MOUNTAIN HOUSE CREEK



SECTION B-B

SCALE: 1" = 20'

Typical Creek Cross-Sections

Natural water flow in the creek is difficult to determine. Under current farming practices the creek is used both for tailing water and irrigation water supply. The creek flow varies from zero to a full flow measuring several feet in depth. Numerous small earthen barriers hold back the flow of water in a number of locations. Water flow from the hills above the community varies from a small trickle to flood flows during major storms. The low ambient flows are considered insignificant when added to the major storm flows and are a negligible factor in drainage structure designs which are based solely on the storm flows.

The proposed design of the creek includes two components: the existing main creek channel and the proposed adjacent floodplain. The main creek channel will remain as is through most of its length. This channel varies from two to 10 feet across. The existing and proposed flood plain will extend up to 100 feet on either side of the main channel. The floodplain will be designed as a series of steps that will double as sediment basins for all but the very high flows. These basins will be located upstream of each road crossing. The maximum design depth will be limited to a few feet.

The proposed design will allow the floodplain to remain dry through all but the most severe storm years as the main creek channel is adequate to handle more than normal flows. The design target will be to limit floodplain inundation to less than once every ten years. With the proper design and the elimination of farm use of the main creek channel, erosion and sediment flow will be reduced to the infrequent major storm events. The design of the floodplain will allow the floodplain to double as a natural wildlife area and community park.

During above-normal and heavy flows from off-site, flows entering the community at the Alameda County line will be allowed to overflow the small creek channel onto the parallel floodplain. The floodplain will slow the flows and serve for sediment collection. However, during major storms such as 50 to 100-year events, the flow rates are too high to allow major sedimentation in the floodplain area.

On-site flood control structures will be designed to minimize silt generation through the use of best management practice detention basins and floating debris and sedimentation structures designed to suit each individual situation.

Special attention has been given to the Mountain House Creek at its junction with Old River. Current conditions show the dredger cut (Mountain House Creek enlarged by dredging) extending several hundred feet up the creek and terminating at a barrier across the creek. During storm flows or excessive irrigation, overflow pipes allow excess creek waters to pass into the dredger cut. When creek flows are low, river water is pumped upstream above the barrier to an enlarged section of the creek that serves as an irrigation pond leading to adjoining lands. Thus water is going up or down stream depending on the season and irrigation needs. The dredger cut is directly connected to the Old River and is subject to the same tidal fluctuations as the river. The net impact of this current design is that the dredger cut is effectively a dead end slough with little circulation and high siltation. Even major storm events do not pass into the cut as they are diverted upstream by bank overflows. The dredger cut is subject to the same agency controls as the river and is occasionally dredged to remove siltation and excessive vegetation.

The proposed design modifies the dredger cut by removing the barrier and allowing the cut to directly carry major storm flows into the Old River at a controlled flow low enough to prevent levee damage in the main channel. This will allow normal scouring in the main creek channel during the major events while at the same time reducing siltation during other years. To reduce siltation during the major flood periods, the floodplain is designed to slow flow and provide silt dropout over a very large area though the entire creek floodplain.

Chapter Seven: Recreation and Open Space provides additional provisions for Mountain House Creek corridor improvements.

Objective: To develop Mountain House Creek as a multi-use corridor for conveyance of off-site and on-site drainage through the community and for a wildlife habitat and recreation corridor.

Objective: To minimize the deposition of sediment from Mountain House Creek into Old River.

Policies:

- a) Mountain House Creek shall be used as an open channel to convey off-site and on-site drainage through the community with adequate flood protection.
- b) Mountain House Creek shall discharge into Old River.
- c) Existing wetlands within Mountain House Creek shall be preserved.
- d) Mountain House Creek shall be designed to minimize erosion.
- e) The discharge of sediment to Old River shall be minimized by causing sediment deposition to occur in the Mountain House Creek channel.

Implementation:

- a) Phasing of Improvements. Improvements to Mountain House Creek shall be constructed on an as-needed basis beginning at the southwestern end of the creek corridor. Such improvements and phasing shall be coordinated with the Mountain House Creek Plan in Chapter Seven. Timing of improvements shall be specified in both the creek plan and in the Specific Plan and shall make provisions for the following:
 - Design for 100-Year Flow. Mountain House Creek and the associated road crossing culverts and railroad crossing culvert shall be designed and constructed to convey the 100-year volumetric flow rate with free board established to County standards.
 - Maximum Velocity. To minimize erosion, the maximum allowable average velocity shall be based on channel material per Table 3-4 of the San Joaquin County Improvement Standards.
 - Planting. As specified in Chapter Seven, selected species of plants shall be planted to enhance the creek habitat and increase the channel boundary roughness and hence reduce the average flow velocity.
 - Channel Bed Slope. Drop structures and check structures may be used to decrease channel bed slope, and thus reduce average flow velocity.
 - Flow Reduction. For several hundred feet along Mountain House Creek immediately upstream from Old River, the average flow velocity shall be reduced below two fps at the 100 year storm flow to enhance sedimentation prior to discharge into Old River. This reduction in average flow velocity shall be achieved by a gradual widening and deepening of the floodplain cross-section. The speed reduction will take place in the creek's floodplain area that will not be subject to permit control.
 - Existing Dams. The two existing farm dams on Mountain House Creek between the Delta-Mendota Canal and the Alameda/San Joaquin County line shall be lowered to

an acceptable level to prevent downstream flood damage from a sudden and complete dam failure. These dams shall be designed and reconstructed to preserve the existing wetlands upstream of each structure and to pass larger flood flows over the dam crest. This may be accomplished without a need for specific permits.

- Wetlands. Within the community, the existing wetlands on Mountain House Creek shall be preserved by the construction of small earthen check berms within the floodplain. The function of these berms shall be to provide periodic inundation of the wetlands and to allow passage of flood events over the crest of the structures. The bulk of flood flows will bypass the wetlands via the floodplain. The berms will be constructed at levels below the adjoining topography to avoid berm failure and inundation.
- Berms. Berms shall be constructed to trap sediment thus reducing the sediment load to Old River.
- Flood Control Structures. Flood control structures on Mountain House Creek (e.g. culverts at road crossings and culverts at the Southern Pacific Railroad crossing) shall be constructed in the flood plain section of the creek and shall not impact the existing creek channel.
- Streambank Stabilization. Structural streambank stabilization measures may be required at points of storm drain discharge into Mountain House Creek. Stabilization and erosion control may also be required downstream of culverts and upstream and/or downstream of sudden channel transitions. In these cases, appropriate structural measures to prevent erosion may include stone riprap, reinforced concrete, log cribbing, gabions, cellular concrete and geotextiles. If possible, natural vegetation shall be incorporated into the erosion control method.
- Specific Plan Requirements. Streambed modification and riparian vegetation proposals shall be prepared for each Specific Plan Area.
- Alteration Agreement. ~~When and~~ If required, prior to construction affecting any portion of Mountain House Creek, the applicant shall apply for and comply with a streambed Alteration Agreement (1603 Agreement) issued by the California Department of Fish and Game.
- 404 Permit. ~~When and~~ If required, prior to construction on Mountain House Creek, the applicant shall apply for and comply with a 404 Permit (Clean Water Act) issued by the Army Corps of Engineers.
- Section 10 Permit. ~~When and~~ If required, prior to construction on Mountain House Creek, the applicant shall apply for and comply with a Section 10 Permit (Rivers and Harbors Act) issued by the Army Corps of Engineers.
- Nationwide Permit. ~~When and~~ If required, prior to construction on Mountain House Creek, the applicant shall apply for and comply with a Nationwide Permit (categorical permits) issued by the Army Corps of Engineers.
- Water Quality Certification. Water quality certification or a waiver thereof, shall be obtained pursuant to Section 401 of the Clean Water Act. Water quality certifications and waivers of certifications are obtained from the Regional Water Quality Board. If authorization from the Army Corps of Engineers is not required as described above, water quality certification is likewise, not required.

- Sedimentation Basin at West Boundary. A sedimentation basin or other effective sediment control structure shall be designed and constructed in the initial phase near the point where Mountain House Creek crosses the western project boundary. The basin should be designed to effectively remove sediment from the creek flows entering the project site. The basin maintenance shall be the responsibility of the CSD. The basin design and maintenance program shall minimize the potential for wetland development in the basin which could hinder the function or maintenance of the structure.

15.7 BEST MANAGEMENT PRACTICES (BMP'S)

Federal regulations are currently being developed to control the runoff of drainage waters to the waters of the United States, with the goal of prevention of contaminated drainage water from entering sensitive waterways. While specific regulations have not yet been fully determined, the storm drainage system design for Mountain House incorporates the Best Management Practices (BMP's) as described below, to address the collection and treatment of urban runoff. Future Specific Plans will be designed to meet or exceed the anticipated regulations, through the incorporation of these or other BMP's.

Objective: To design a storm drain system that will reduce the quantity of storm water pollutants as close to the point of origin as possible, and to incorporate cost effective BMP treatment processes into system's design.

Policies:

- a) Site specific and regional treatment BMP's shall be incorporated into the design of all improvements including all structures and infrastructure. ~~the storm drain system.~~

Implementation:

- a) Source Control BMP's. Source control BMP's which are feasible for the area shall be incorporated into the first Development Permit for each Specific Plan Area. Source control BMP's are defined as: (1) planning management, (2) materials management, (3) spill prevention and cleanup, (4) illegal dumping controls, (5) illicit connection controls, and (6) street/storm sewer maintenance.
- b) BMP's. The BMP's described below shall be implemented where appropriate along with any additional BMP's that may be determined to be practical and feasible.
- c) Community Design. The community shall be designed to minimize the amount of directly connected impervious area (DCIA) that is connected to the storm drainage system and to provide setbacks from environmentally sensitive areas. Where possible, runoff shall be directed to landscaped areas, grass buffer strips, and grass lined swales to slow down the rate of runoff, reduce runoff volumes, and promote filtering and infiltration of stormwater.
- d) Material Management Plan. A material management plan for each business with potential pollutants shall be adopted and enforced prior to the issuance of building permits for commercial or industrial uses to control the use, storage and disposal of chemicals that could pollute runoff.
- e) Spill Prevention and Cleanup Plan. A spill prevention and cleanup plan shall be adopted prior to the issuance of building permits for commercial or industrial uses to minimize the

risk of spills during outdoor handling and transport of chemicals, and to contain and rapidly clean up spill before entering the storm drain system.

- f) Illegal Dumping. An illegal dumping regulation shall be adopted and enforced prior to the issuance of building permits for commercial or industrial uses to prevent businesses and individuals from dumping waste products into the drainage system.
- g) Illicit Connections. An illicit connection regulation shall be enforced to prevent connections to the storm drainage system that discharge material except rainfall runoff into the drainage system.
- h) Maintenance Program. A street/storm sewer maintenance program shall be developed to provide for the removal of pollutants from paved areas (e.g. street sweeping) and maintains the functions of the various storm drain components.
- i) Site Specific BMP's. Site specific BMP's shall be required for industries, public facilities and businesses which generate polluted runoff which differs in concentration and/or content from residential runoff. Industries, public facilities and businesses may be required to treat on-site runoff prior to discharge into the public storm drain collection system.
- j) BMP Processes. Possible site specific BMP's shall include, but not be limited to, extended detention followed by filtration and oil/water separators.
- k) Regional Treatment. Regional BMP treatment processes shall be required for the community.
- l) Regional Processes. Possible regional BMP treatment processes shall include, but not be limited to, extended dry detention basins, wet detention basins or ponds and/or wetland bottom channels.

15.8 FLOOD PROTECTION

In accord with the General Plan policies for flood protection, the entire community will require protection from a 100-year flood. The majority of the Mountain House area is not subject to a 100-year flood classification. A levee along Old River protects the northernmost area from flooding (8.5' flood elevation), although in a major flood the levee could fail because it was constructed prior to U.S. Corps of Engineers certification and may not meet current standards. Therefore, flooding could occur in an area comprising approximately five percent of the community and located near Old River.

Figures 15.7 to 15.10 illustrate existing flood hazard conditions and proposal for flood protection. Appendix 15-C: Sources of Flooding provides supplementary material.

Objective: To protect people and property in the Mountain House community from flood hazards.

Policies:

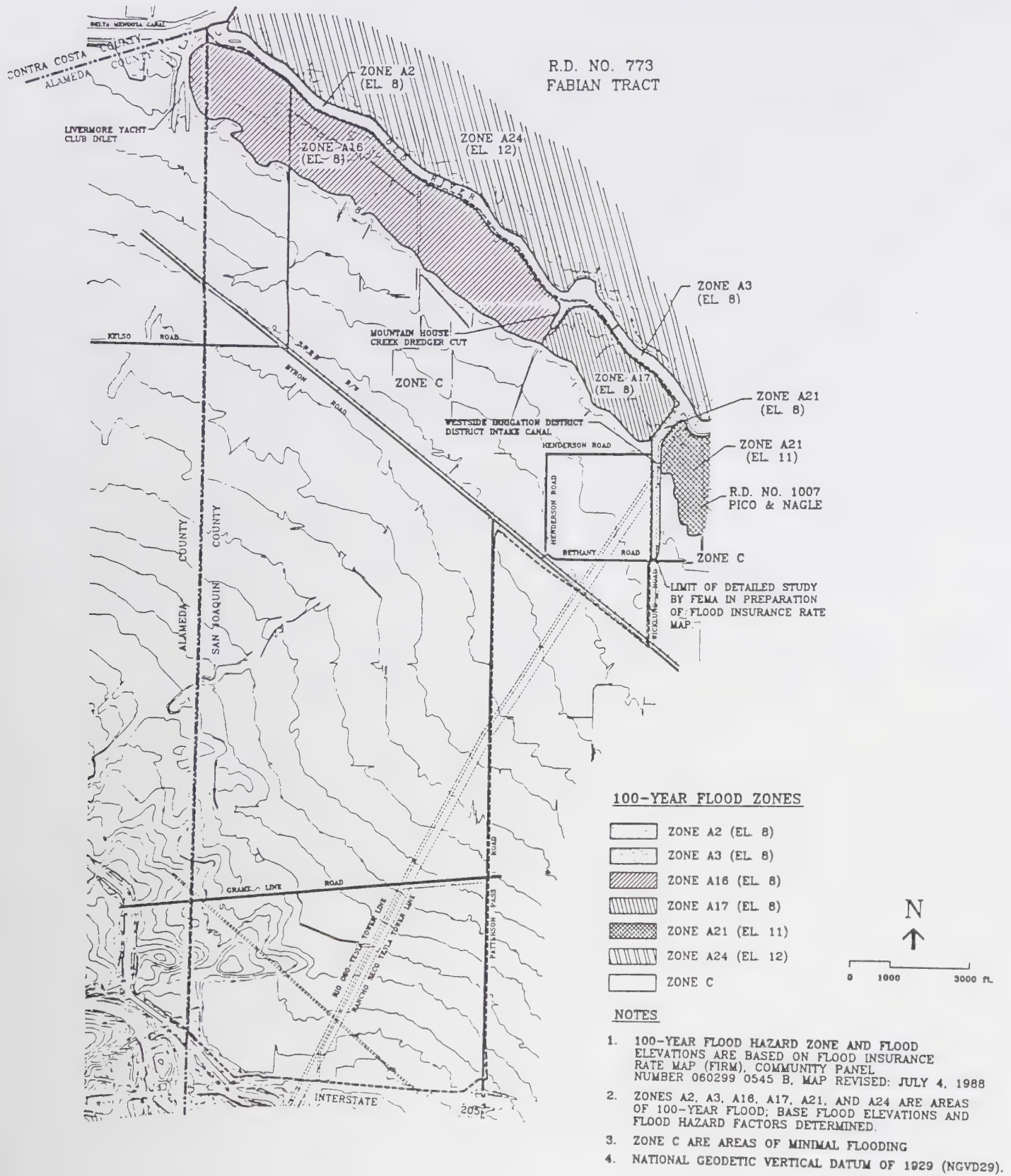
- a) The entire Mountain House community shall be protected from a 100-year flood.

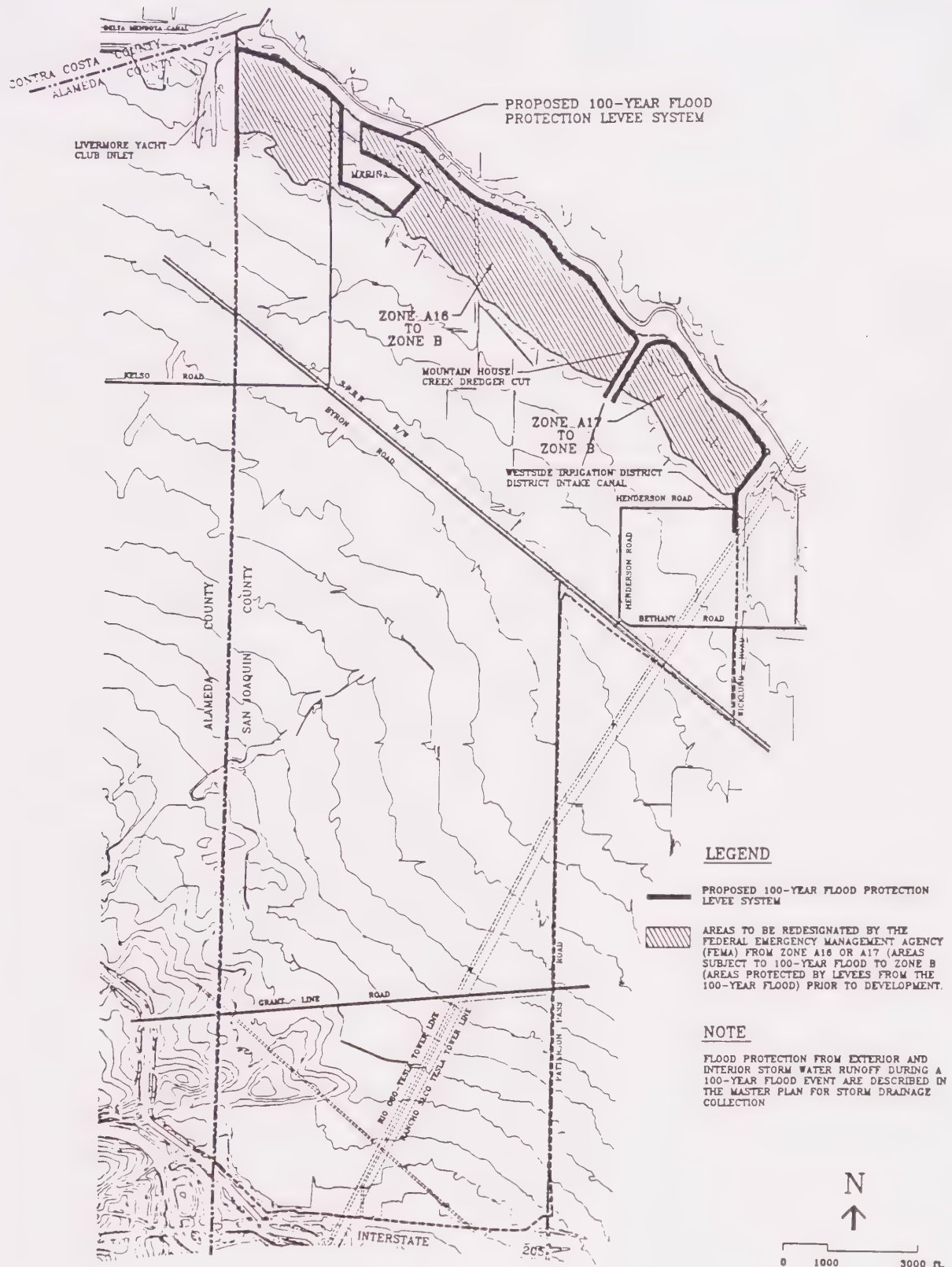
Implementation:

- a) Monitoring. On-site dams, levees and berms protecting the County and the Mountain House community from flooding shall be monitored by the CSD to identify potential problems.
- b) Requirements for Flood-Prone Areas. The development of the areas in the Mountain House community which are identified to be subject to flooding shall be subject to requirements for participation in the National Flood Insurance Program (NFIP), San Joaquin County General Plan 2010, Volume I, and San Joaquin County's Development Title.
- c) Proposed Levee System. A new levee system shall be constructed immediately adjacent to but structurally separate from any existing substandard levees. Both the existing substandard levees and the proposed levee shall be developed as regional public recreational parks and/or wildlife habitat areas subject to levee encroachment standards established by the agency responsible for the operation and maintenance of the new levee system. (See Figure 15. 10: Typical Flood Protection Levee Cross-Section and Chapter Seven: Recreation and Open Space).

The new levee system shall extend from the San Joaquin / Alameda County line easterly approximately 15,000 feet to the W.I.D. intake canal. The new levee system shall extend southerly to an elevation contour sufficient to meet agency standards estimated at a contour elevation of 12 feet: (1) at the San Joaquin / Alameda County line, 2) at the easterly and westerly banks of the Mountain House Creek dredger cut and 3) at the westerly bank of the W.I.D. intake canal.

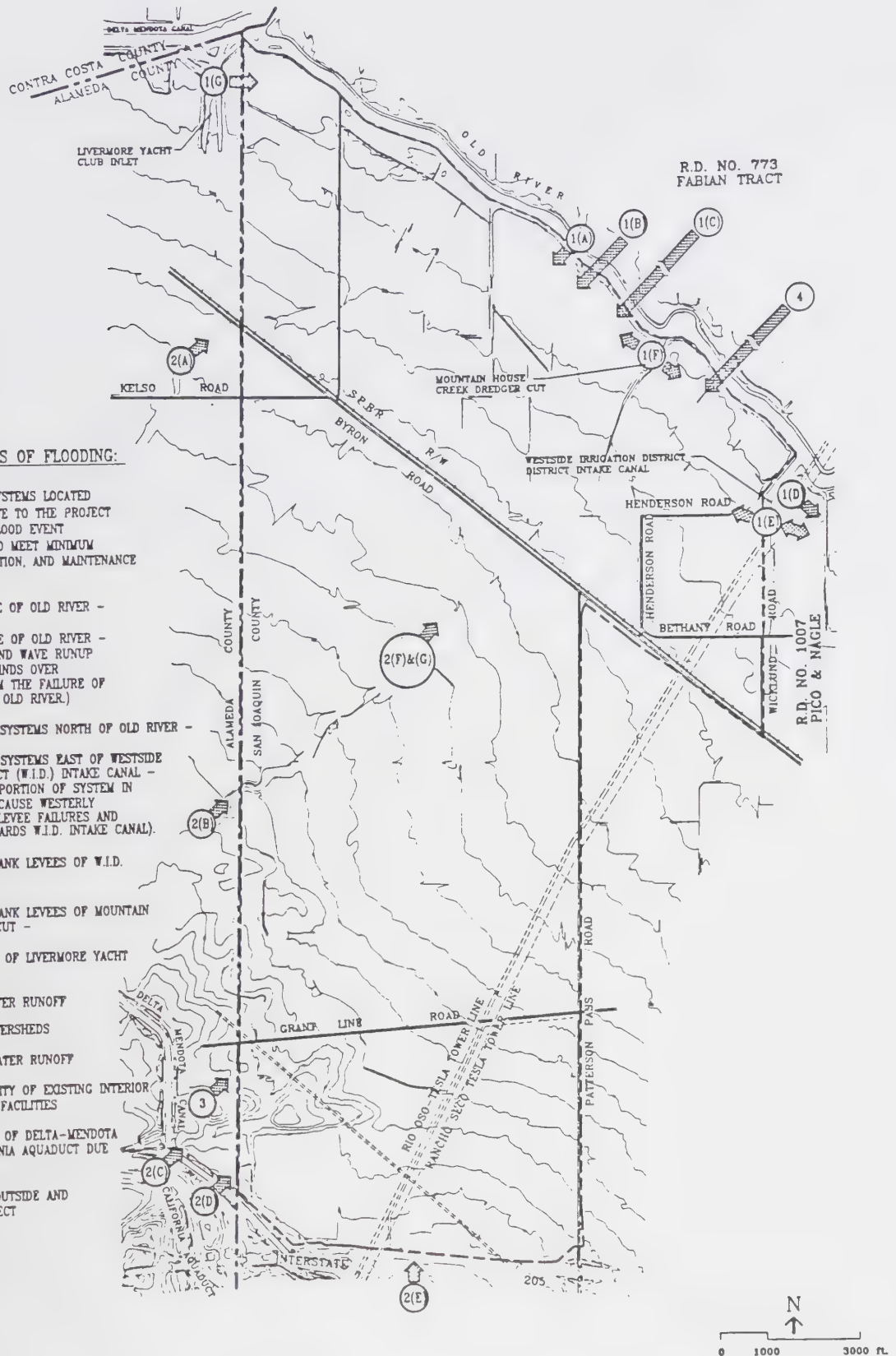
- d) Minimum Levee Design Criteria. The proposed new levee system shall meet, as a minimum, the requirements of Section 65.10 Mapping of Areas Protected By Levee Systems, 44 CFR Ch. 1 and the design standards specified herein. (See Figure 15.10: Typical Flood Protection Levee Cross-Section).
- e) Levee and Encroachment Standard. Prior to approval of any Specific Plan including the Old River levee, a levee encroachment standard and processing procedure for encroachment permits (including the Old River levee) shall be developed.
- f) FEMA Application. After the new levee system is constructed along Old River, an application shall be made to the Federal Emergency Management Agency to change the flood insurance maps.

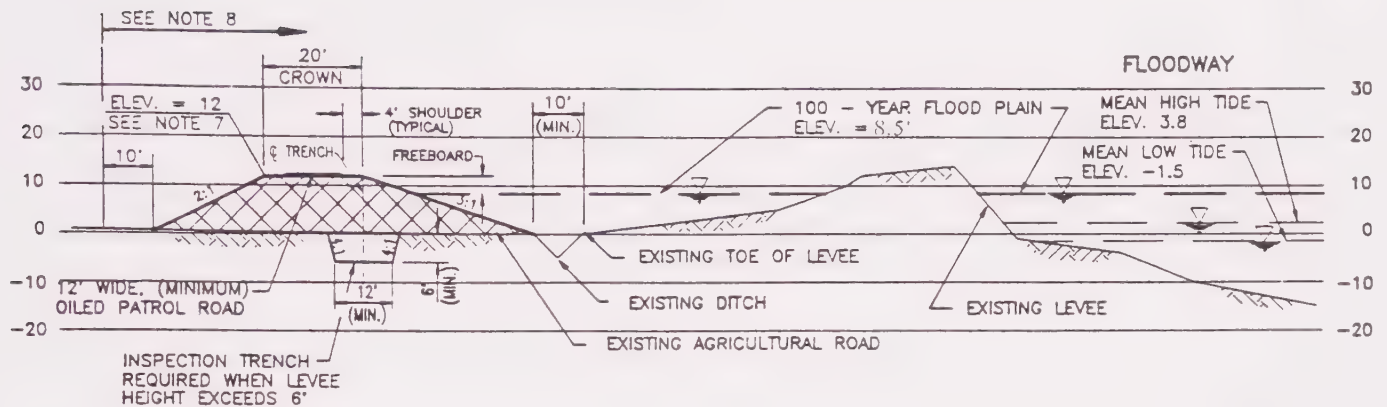




POTENTIAL SOURCES OF FLOODING:

1. FAILURE OF LEVEE SYSTEMS LOCATED WITHIN AND PROXIMATE TO THE PROJECT DURING 100-YEAR FLOOD EVENT BECAUSE THEY DO NOT MEET MINIMUM FEMA DESIGN, OPERATION, AND MAINTENANCE STANDARDS
 - (A) SOUTH BANK LEVEE OF OLD RIVER -
 - (B) NORTH BANK LEVEE OF OLD RIVER - (MAY NOT WITHSTAND WAVE RUNUP FROM FETCH OF WINDS OVER FLOODWATERS FROM THE FAILURE OF LEVEES NORTH OF OLD RIVER.)
 - (C) PROXIMATE LEVEE SYSTEMS NORTH OF OLD RIVER -
 - (D) PROXIMATE LEVEE SYSTEMS EAST OF WESTSIDE IRRIGATION DISTRICT (W.I.D.) INTAKE CANAL - (FAILURE OF ANY PORTION OF SYSTEM IN THE EAST COULD CAUSE WESTERLY PROGRESSION OF LEVEE FAILURES AND FLOODWATERS TOWARDS W.I.D. INTAKE CANAL).
 - (E) EAST AND WEST BANK LEVEES OF W.I.D. INTAKE CANAL -
 - (F) EAST AND WEST BANK LEVEES OF MOUNTAIN HOUSE DREDGER CUT -
 - (G) EAST BANK LEVEE OF LIVERMORE YACHT CLUB INLET -
2. 100-YEAR STORMWATER RUNOFF
 - (A)-(E) EXTERIOR WATERSHEDS
 - (F) INTERIOR STORMWATER RUNOFF
 - (G) EXCEEDING CAPACITY OF EXISTING INTERIOR STORM DRAINAGE FACILITIES
3. FAILURE OF LEVEES OF DELTA-MENDOTA CANAL AND CALIFORNIA AQUADUCT DUE TO EARTHQUAKE
4. FAILURE OF DAMS OUTSIDE AND UPSTREAM OF PROJECT





MINIMUM LEVEE DESIGN CRITERIA

1. MINIMUM LEVEE DESIGN CRITERIA SHALL BE IN ACCORDANCE WITH SECTION 65.10, 44 CFR CH. 1 AND AS STIPULATED HEREIN WHICHEVER IS THE GREATER REQUIREMENT.
2. 3' FREEBOARD ABOVE 100-YEAR FLOOD PLAIN, PLUS A 1' ALLOWANCE FOR LEVEE SETTLEMENT.
3. 20' CROWN WITH 12' WIDE, (MINIMUM) OILED PATROL ROAD.
4. 3:1 MINIMUM WATERSIDE BANK SLOPE WITHOUT STONE PROTECTION.
5. 10' SETBACK FROM TOE OF EXISTING LEVEE.
6. TURNAROUNDS SPACED AT 2,500'.
7. IN THE EVENT THAT THE EXISTING PROXIMATE LEVEE SYSTEMS LOCATED OUTSIDE OF THE MASTER PLAN AREA ARE PREDICTED TO FAIL DURING A 100-YEAR FLOOD EVENT, THE TOP OF LEVEE CROWN ELEVATION SHALL BE DESIGNED AT EITHER 1' ABOVE THE MAXIMUM WAVE RUN-UP ELEVATION PLUS A 1' ALLOWANCE FOR LEVEE SETTLEMENT OR 3' ABOVE THE 100-YEAR FLOOD PLAIN PLUS 1' ALLOWANCE FOR LEVEE SETTLEMENT, WHICHEVER IS THE HIGHER ELEVATION.
8. RESERVED AS REGIONAL PUBLIC RECREATIONAL PARK AND/OR WILDLIFE HABITAT AND SUBJECT TO FLOOD CONTROL AGENCY ENCROACHMENT STANDARDS.
9. DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29)
10. LEVEE MUST BE DESIGNED TO MEET STATE RECREATION BOARD AND FEMA STANDARDS IN REGARDS TO MAINTENANCE, ROAD WIDTH, LEVEE SIDE SLOPES, COMPACTION, AND OTHER REQUIREMENTS.

Typical Flood Protection Levee Cross-Section

15.9 SITING CRITERIA

Objective: To insure that drainage facilities are sited to perform efficiently while minimizing visual, safety, or other impacts.

Policies:

- a) Storm drainage retention/detention ponds shall be located in such a manner, by incorporating into golf course water hazards and parks, as to minimize the visual impact on the adjacent community.

Implementation:

- a) Screening. Where the facility is exclusively used for storm drainage purposes, the site shall be fenced in order to bar entry to the facility by the public. Where ponds interface with public streets or adjacent land developments, a buffer of landscaping shall be installed that will visually hide the facility from the adjacent land uses.
- b) Temporary Facilities. Temporary storm drainage retention/detention basins shall be exempt from the siting criteria noted above, except for those relating to health and safety.

15.10 REGULATORY PERMITS

One or more of the following permits may be required prior to the commencement of construction of future Specific Plans.

15.10.1 Corps of Engineers

The Corps of Engineers administers two Federal laws which may require that Department of the Army Permit(s) be obtained for certain aspects of the project. These laws are Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

The Mountain House Master Plan avoids any placement of dredged or fill material into any waters of the United States, including wetlands, except for construction of the proposed raw water conveyance pipeline within the initial Specific Plan area. The construction of this pipeline is proposed to conform with the conditions of Nationwide Permit number 12. Therefore, neither an individual permit nor a predischage notification would be required within the Master Plan area.

15.10.2 California Department of Fish & Game

In addition to any required dredge and fill permits issued by the Corps of Engineers, a Streambed alteration Agreement (also known as a 1603 Agreement) pursuant to Sections 1601-1607 of the California Fish and Game Code would be required prior to any alteration of a lake, river, or streambed bottom or margin. Stream Alteration Agreements are issued by the California Department of Fish and Game. Work in or adjacent to Old River, Mountain House Creek and Dry Creek will require Streambed Alteration Agreement(s). The construction of bridges over Mountain House Creek and Dry Creek will require Stream Alteration Agreements even though no culverts or fill will be placed in the creeks. Likewise construction of the raw water conveyance pipeline will require a Stream Alteration agreement where it crosses Dry Creek.

15.10.3 Central Valley Regional Water Quality Control Board

In addition to Streambed Alteration Agreements or Corps of Engineers permits, it is further required that water quality certification, or a waiver thereof, be obtained pursuant to Section 401 of the Clean Water Act for certain Specific Plans. Water quality certifications and waivers of certification are obtained from the Regional Water Quality Control Board. If authorization from the Corps of Engineers is not required as described in 15.10.1, above, water quality certification is likewise, not required.

15.10.4 Central Valley RWQCB/NPDES General Permit

Storm water discharges into Mountain House Creek and Old River could contain pollutants that may adversely impact the beneficial uses of Old River. To address this issue, a Notice of Intent to the Central Valley RWQCB shall be submitted at least 30 days prior to the commencement of construction and shall comply with all requirements specified in the NPDES General Permit for construction activities.

15.11 PHASING AND COSTS

15.11.1 Capital Facility Cost and Phasing

Approximately \$29 million has been included in the cost estimates for storm drainage and flood control facilities, including transmission pipelines, detention basins, and levee improvements. The storm collection system will generally be built in increments that correspond to the twelve neighborhoods.

Construction between Mascot Drive and Grant Line Road will require a second trunk pipeline running under Patterson Pass Road north across the tracks to BMP ponds in the golf course fairways. If golf course development is not ready to proceed, temporary BMP ponds would have to be constructed. Construction south of Grant Line Road will require a trunk pipeline running north to Mascot Boulevard and an open channel from Mascot to Old River.

The three storm lines discussed above are independent of each other and can be built in any order; they are, however, projected to be built in the order presented, approximately five years apart. The main consideration will be the timing of construction of Patterson Pass Road, as coordinated planning will save tearing up new roadways to lay pipe.

Mountain House Creek flood improvements will be constructed in the following sequence:

- a) East side of Upper Mountain House Creek (from Main Street to Alameda County line). Includes any necessary contour grading north of Main Street to Byron Road to insure that any flood waters overtopping the creek are confined to the creek area long enough to drain through the existing Byron Road culverts. Required prior to construction of any structures in Neighborhood F and half of Neighborhood E.
- b) West side of Upper Mountain House Creek (from DeAnza Boulevard to County line). Includes agricultural dam reconstruction in Alameda County and west side of creek from Main Street to DeAnza Boulevard. Required prior to construction of any structures located northwest of the creek.
- c) Remainder of both sides of Mountain House Creek (from Main Street to north side of railroad tracks). Includes undercrossing of Byron Road and tracks. Required

prior to construction of Neighborhood H and Town Center area north of Main Street, with the exception of park open space areas.

- d) Realignment of Mountain House Creek and western half of creek's floodplain from railroad tracks to dredger cut. Required prior to construction of all areas west of new creek alignment, except Old River Industrial Park, which does not require flood protection from Mountain House Creek.
- e) Completion of western half of Mountain House floodplain from tracks to dredger cut. Includes removal of dredger cut dam and construction of transition structure. Required prior to construction north of the railroad tracks and east of the future extension of Marina Boulevard.

Phasing of the storm improvements to Mountain House Creek will take place in the order listed above, although accelerated growth may justify combining several steps.

Removal of the low areas along the Old River from the flood plain will take place in three stages:

- a) Levee improvements from the Wicklund Cut to Mountain House Creek.
- b) Levee improvements from Mountain House Creek to the Marina outlet to Old River.
- c) Levee improvements from the Marina, west to the County line, and along the County line south to the appropriate safe elevation.

Flood control work on Mountain House Creek and Dry Creek must be completed prior to the levee work in order to provide protection of low areas behind the levee from flooding caused by flows from the hills above the community.

15.11.2 Operations and Maintenance

Storm drainage and flood protection facilities will be maintained by the CSD. ~~and the San Joaquin County Flood Control and Water Conservation District or by a special district that is authorized to provide these services.~~ A channel maintenance plan shall be prepared prior to the submittal of the first development permit and shall include a program to monitor sedimentation buildup for Mountain House Creek and drainage channels. Maintenance personnel, vehicles, and equipment may be shared with other facility maintenance crews to achieve staffing efficiency and cost reductions. These maintenance costs have been incorporated in the fiscal analysis presented in the PFP.

15.12 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) Design of Storm Facilities. Detailed studies for each watershed area shall be prepared and utilized in the design of each segment of storm facilities required for each Specific Plan, and shall be completed and approved prior to the submittal of Specific Plans. For Specific Plan I, these studies shall be approved prior to submittal of the first Development Permit.
- b) Detention Pond Design. For Specific Plan I, the preliminary locations and capacities of detention ponds within the Specific Plan I Area shall be determined prior to submittal of

the first development permit. Each subsequent Specific Plan shall include the preliminary locations and capacities of detention ponds within the Specific Plan boundaries.

- c) Streambed Modifications. Streambed modification and riparian vegetation proposals shall be prepared for each Specific Plan Area
- d) Phasing of Improvements. Improvements to Mountain House Creek shall be constructed on an as-needed basis beginning at the southwestern end of the creek corridor. Timing of improvements shall be specified in both the creek plan and in the Specific Plan.
- e) Levee and Encroachment Standard. Prior to approval of any Specific Plan including the Old River levee, a levee encroachment standard and processing procedure for encroachment permits (including the Old River levee) shall be developed.

Implementation

CHAPTER SIXTEEN



PUBLIC SERVICE PROVISIONS

CHAPTER SIXTEEN: PUBLIC SERVICE PROVISIONS

16.1	BACKGROUND	1
16.2	ASSUMPTIONS	1
16.3	OBJECTIVE	2
16.4	POLICIES	2
16.5	IMPLEMENTATION	2
16.6	SPECIFIC PLAN REQUIREMENTS	4

CHAPTER SIXTEEN: PUBLIC SERVICE PROVISIONS

16.1 BACKGROUND

This chapter describes the public service provisions for the community of Mountain House. As used in this chapter, "public services" refers to public services and public facilities, and to the establishment, operation and maintenance of the services and facilities.

San Joaquin County will have authority over land use planning, the administration of justice, the provision of human services, integrated waste management, and other powers.

A Community Services District (CSD) will be created with authority to provide various public services. The CSD sphere of influence boundaries will have the same boundaries as the Master Plan. The Community Services District will be formed ~~as a dependent district~~ with the County Board of Supervisors serving as its initial Board of Directors. It is contemplated that, in time, the Community Services District will become an independent district, with its own elected Board of Directors. There is state legislation pending on the expansion of powers that the Mountain House Community Services District may provide. It is possible that Mountain House may someday become an incorporated city.

The Mountain House site is located within the current service area of the Tracy Rural Fire Protection District. The service provided is rural in nature and does not meet the urban service standards that will be required for Mountain House. The County proposes that the Community Services District be designated by LAFCO to provide fire protection service. The objective is to ensure that a full revenue return is committed to the long-term maintenance of urban service for Mountain House. Initially, the Community Services District will contract with the Tracy Rural Fire Protection District for an urban level of fire protection. In time, as fire facilities, equipment and personnel are provided on-site, the Community Services District will assume day-to-day responsibility for operations.

Educational services are to be provided by the Lammersville Elementary School District and the Tracy Joint Union High School District.

Two other districts will provide service to the Mountain House site: the San Joaquin County Mosquito and Vector Control District and the San Joaquin County Resource Conservation District. The Mosquito and Vector Control District will continue to provide abatement services. The Resource Conservation District (RCD) oversees soil surveys conducted by the U.S. Soil Conservation Service but the RCD will not be providing any urban public services to Mountain House.

16.2 ASSUMPTIONS

- a) A Community Services District will be formed for the purpose of providing public services to Mountain House.
- b) The Tracy Rural Fire Protection District will perform initial fire protection duties under contract to the Community Services District.
- c) As Mountain House develops, more servicing responsibilities may be provided directly by the Community Services District.

- d) The boundaries of the Community Services District will not be expanded beyond the Mountain House community, as shown on the map of the County General Plan.

16.3 OBJECTIVE

To establish a framework for public services that will provide Mountain House residents with urban services and facilities in a cost-efficient manner that does not have adverse fiscal impacts on the County.

16.4 POLICIES

- a) A Community Services District shall be formed ~~initially as a dependent district~~, with the County Board of Supervisors initially serving as the District's initial Board of Directors.
- b) The boundaries of the Community Services District Sphere of Influence should be identical to the boundaries of the Mountain House Master Plan.
- c) The initial CSD boundaries shall include sufficient land and a balance of land uses adequate to insure a viable community.
- d) Annexation into the CSD shall be required for all development in the Mountain House community. The initial land to be included in the CSD annexation shall be as defined in the first Specific Plan.
- e) An adequate urban level of public services shall be provided for the residents of Mountain House.
- f) The County shall retain public service responsibilities until such time as the County deems it appropriate to transfer specific responsibilities to the Community Services District.
- g) The civic and public administration buildings should be located in the Town Center.
- h) Public services shall be provided in a manner that is cost-effective and consistent with the Public Financing Plan and the Master Plan.
- i) The County shall ensure that the actions of the Community Services District are consistent with County plans, policies, standards, ordinances and programs relative to Mountain House.
- j) Agreements regarding public services for Mountain House shall be consistent with the applicable Master and Specific Plan provisions.

16.5 IMPLEMENTATION

- a) Formation of a Community Services District. The formation of a CSD shall be approved by LAFCO not later than the submittal of the first development application for the community. The initial CSD shall ~~will~~ be formed with the County Board of Supervisors acting as the CSD Board of Directors.
- b) CSD Inclusion. ~~Prior to The submittal of any Development Permit, the land area that is the subject of the Development Permit shall a) have been approved by LAFCO for annexation into the CSD, or b) have obtained~~ shall include a Will Serve Letter for the project area from the CSD indicating that the CSD can and will provide the services required under the Master Plan and appropriate Specific Plan. Annexations to the CSD

shall have been completed prior to establishment of the use, issuance of building permit, or recording of a map, whichever occurs first.

- c) CSD Boundaries. The initial CSD boundaries shall be as defined in the first Specific Plan. The ultimate boundaries of the CSD shall be the same as the CSD Sphere of Influence which shall coincide with the boundaries of the community as defined in this Master Plan.
- d) Extension of Services. The CSD shall not extend services beyond its boundaries without the agreement of the County. The extension of services shall not have an adverse financial or fiscal impact on the community or the County.
- e) Pre-Existing Land Uses. Those lands improved with existing structures as generally cited in Section 3.2.4: Pre-Existing Land Uses Within the Mountain House Community Boundaries, of this Master Plan shall not be obligated to annex to the CSD unless they elect to join the CSD in order to obtain a higher level of services.
- f) Location of Public Facilities. Each Specific Plan shall identify the location of any public facilities. Provisions for public facilities shall be provided in accordance with the related chapters of the Master Plan.
- g) Public Services Allocations. A Public Services Allocation Agreement between the County and the CSD shall allocate and/or assign service provider responsibility among the parties. The agreement shall also identify the financial responsibility of each designated service provider. The agreement shall be signed prior to the submittal of the first Development Permit.
- h) Financing of Public Services. The Public Financing Plan, subsequent Development Agreements and other agreements shall incorporate provisions which ensure that public service operations do not adversely affect the fiscal condition of the County, and shall ensure that adequate financing is available to provide public services for the development of Mountain House.
- i) Agreements Between the Community Services District and the School Districts. Prior to the submittal of the first Development Permit application, the Community Services District shall enter into an agreement with the school districts respecting matters of building construction, operation, and maintenance, public uses of school facilities, and student transportation.
- j) Police Protection. The CSD shall contract with the County for the Sheriff's Department to provide an urban level of police protection. As necessary to meet the needs of the community, the Community Services District may supplement the police services.
- k) Fire Protection. The Community Services District shall contract with the Tracy Rural Fire District for initial provision of an urban level of fire protection service.

16.6 SPECIFIC PLAN REQUIREMENTS

The following list is a compilation of all Specific Plan requirements contained in this chapter.

- a) CSD Boundaries. The initial CSD boundaries shall be as defined in the first Specific Plan. The ultimate boundaries of the CSD shall be the same as the CSD Sphere of Influence which shall coincide with the boundaries of the community as defined in this Master Plan.
- b) Location of Public Facilities. Each Specific Plan shall identify the location of any public facilities. Provisions for public facilities shall be provided in accordance with the related chapters of the Master Plan.

CHAPTER SEVENTEEN



IMPLEMENTATION

CHAPTER SEVENTEEN: IMPLEMENTATION

17.1	INTRODUCTION	1
17.1.1	Sequence of Approvals	1
17.1.2	Implementation Measures	1
17.1.3	Sequence of Implementation	2
17.1.4	Principles of Implementation	2
17.2	TIMING OF IMPLEMENTATION MEASURES	3
17.3	COUNTY GENERAL PLAN AND DEVELOPMENT TITLE	4
17.4	COMMUNITY-WIDE PLANS	4
17.5	SPECIFIC PLANS	5
17.5.1	Purpose of Specific Plans	5
17.5.2	Specific Plan Contents	6
17.5.3	Specific Plan Amendments	6
17.5.4	Specific Plan Minimum Area	6
17.5.5	Specific Plans For Designated Areas	7
17.6	SPECIAL PURPOSE PLANS	8
17.7	DEVELOPMENT PERMITS	8
17.7.1	Definition of Development Permit	8
17.7.2	Exceptions to First Development Permit	9
17.8	PUBLIC PROJECTS	9
17.9	LAFCO PROCEEDINGS	9
17.10	ENVIRONMENTAL REVIEW	10
17.11	DEVELOPMENT AGREEMENTS AND PUBLIC SERVICES ALLOCATION AGREEMENT	10
17.12	PHASING	11
17.13	MONITORING	11
17.13.1	Community Monitoring	11
17.13.2	Community Data Collection	13
17.13.3	Fiscal and Financial Stability	13
17.13.4	Agricultural Mitigation Fee	14
17.14	ADMINISTRATION	14
17.15	INTERPRETATIONS, AMENDMENTS AND MINOR ADJUSTMENTS	18

List of Tables

Table 17.1: Generalized Mountain House Approval Process	3
Table 17.2: Required Approvals	16

CHAPTER SEVENTEEN: IMPLEMENTATION

17.1 INTRODUCTION

This chapter provides a program for the implementation of measures needed for the development of Mountain House.

17.1.1 Sequence of Approvals

The planning and development process for Mountain House follows the sequence illustrated by Table 17.1: Generalized Mountain House Approval Process.

As the process continues, amendments of the County General Plan, the Development Title, the Mountain House Master Plan or the Public Financing Plan may be necessary. Each subsequent plan or permit must be consistent with the previously adopted plan(s).

17.1.2 Implementation Measures

Individual implementation measures are contained in each chapter of this Master Plan. Implementation measures include:

- A plan or a program,
- A continuing activity,
- A one-time action,
- Monitoring and reporting activities, and other actions as may be defined in this Master Plan.

The Mitigation Monitoring Program adopted concurrent with this Master Plan includes additional implementation measures.

This chapter does not attempt to identify all of the implementation procedures that will be developed and put into effect during the 20-to-40 year buildout of Mountain House. Nor does this chapter seek to identify all possible times of implementation. Rather, the chapter is intended to ensure that over time implementation will be comprehensive, yet responsive to changing circumstances. The objectives are to minimize the number of implementation points along the way to construction and to avoid the need to revise previously adopted plans. Equally important is providing a process whereby additional information can be incorporated into the process as Mountain House moves forward.

17.1.3 Sequence of Implementation

Four basic processing stages are used for implementation:

- Master Plan and Public Financing Plan
- Specific Plan
- Development Permits
- Use establishment.

“Development Permits” refer to County permits that are either discretionary or ministerial in nature. Legislative Discretionary Permit (e.g. General Plan and Development Title Amendments, Specific Plans and Zone Reclassifications and Special Purpose Plans) are excluded by definition. Examples of Development Permits are use permits, subdivisions, and building permits (see Section 17.7: Development Permits, for definition).

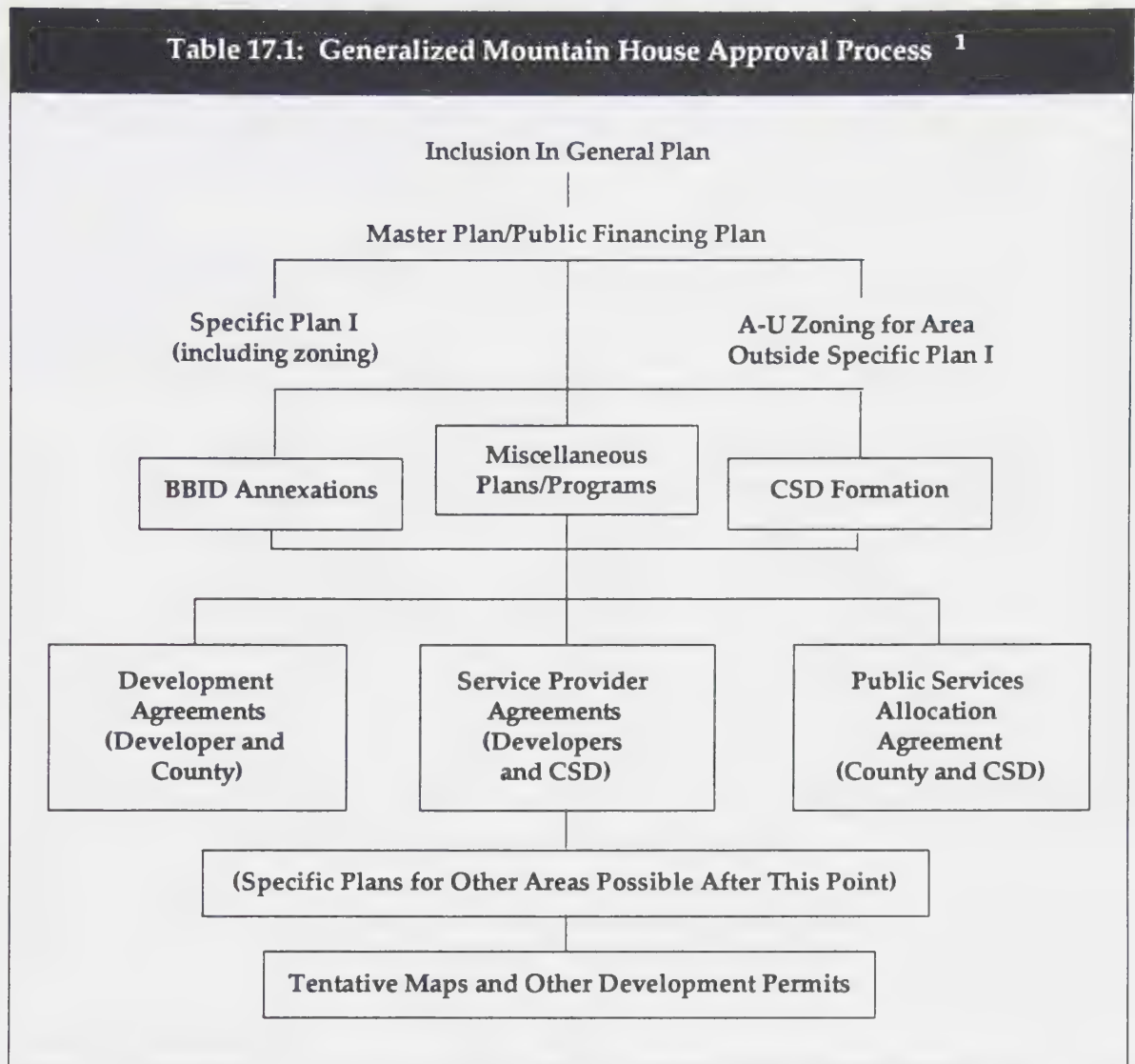
Implementation stages are sequential and each stage must be completed before the process may move to the next stage.

The Master Plan describes the stages at which individual implementation measures are to be identified and put into effect. It is recognized that some measures may need to be identified at one stage but put into effect at a later stage. For example, the community’s plan for roads involves definition of arterial roads as part of the Master Plan, collector roads in Specific Plans, and local roads at the Development Permit stage. Other measures such as detailed plans and programs will be identified at one stage, developed later, and then used in the submittal of the first Development Permit.

17.1.4 Principles of Implementation

The determination of the appropriate implementation stage is based on three principles: 1) services and facilities should be in place as they are needed; 2) the geographic area of responsibility should correspond to the area of benefit, 3) all parties—from the master developer to the homeowner or businessperson—should share responsibility on the basis of benefit received.

Generally, regional or community-wide implementation measures are included in the Master Plan. Implementation measures that are scaled to a residential neighborhood or to a major commercial, industrial or recreational center should be included in a Specific Plan or Special Purpose Plan for the local area. At the Development Permit stage, implementation is generally more detailed than at the Specific Plan stage.

Table 17.1: Generalized Mountain House Approval Process ¹

- 1) This description does not include the CEQA Environmental Review process.
- 2) The initial development agreement may occur prior to development plans/programs

17.2 TIMING OF IMPLEMENTATION MEASURES

Various implementation measures in this Master Plan indicate the time by which they must be done. For example, one measure calls for the widening of Patterson Pass Road to four lanes between Byron and I-205 by the buildout of 4,100 dwelling units and another measure calls for the neighborhood park in each neighborhood to begin construction by the time that 50% of the neighborhood's residential units are constructed. These triggers for implementation are approximate. The actual need and/or implementation may occur earlier or somewhat later. For example, if the traffic projections are less than expected, roadway improvements may be deferred. On the other hand, accelerated traffic may require an earlier implementation.

Determination of the actual timing for an implementation measure will occur either in the application review process or in the annual monitoring of the community. Each Development Permit application must be evaluated for consistency with the Master Plan. If the implementation called for in the Master Plan is not being met, the required timing of the implementation with respect to the need for it should be reviewed and considered by the Review Authority in determining if the application is consistent with the Master Plan. Applications that are clearly inconsistent with the intent of the Plan may either be continued until the situation is resolved or must be denied.

An annual monitoring of the development of the community and the status of the Master Plan should also reveal any lack of implementation. If there are serious problems with implementation occurring on schedule, these problems can be considered in action on proposed development applications, or, if warranted, the Master Plan can be amended. In all cases, the impact on the Public Financing Plan must be considered.

17.3 COUNTY GENERAL PLAN AND DEVELOPMENT TITLE

The San Joaquin County General Plan is the County's policy document for development of all Mountain House plans, agreements and permits. The General Plan is implemented by the County Development Title, which contains zoning provisions and ordinances regulating Development Permits.

All Mountain House development approvals must remain consistent with the General Plan and Development Title. As previously noted, it is expected that these documents may need to be amended as more specific planning is done for Mountain House. These amendments may be done concurrently with a Mountain House plan.

17.4 COMMUNITY-WIDE PLANS

The Master Plan and the Public Financing Plan are the first plans adopted to implement the General Plan. Both plans are community-wide in scope. Each document has provisions that are either of a policy or regulatory nature. The Master Plan contains development regulations that are specific to Mountain House. Both the Master Plan and the Public Financing Plan must be consistent with the County General Plan.

Other community-wide plans or programs will be prepared for Mountain House. Examples include the Parks and Open Space Plan, the School Facilities Plan and the Transportation Demand Management Program. These are required by the Master Plan and will need to be consistent with it. Specific implementation will be included in these plans and programs.

Policies:

- a) The Master Plan and the Public Financing Plan, and any amendments thereto, shall be consistent with the General Plan.
- b) The Master Plan and the Public Financing Plan shall be consistent with each other.
- c) The Master Plan and Public Financing Plan each shall be internally consistent.
- d) Implementation of the Public Financing Plan shall not adversely affect the fiscal condition of the County.
- e) The Master Plan and Public Financing Plan shall be implemented by Specific Plans.

- f) Each Discretionary Development Permit approval shall require a finding that it is consistent with the Master Plan, Public Financing Plan, and pertinent Specific Plan.
- g) Community-wide plans or programs developed after approval of the Master Plan shall require a public hearing and recommendation by the Planning Commission and a public hearing and decision by the Board of Supervisors.

17.5 SPECIFIC PLANS

17.5.1 Purpose of Specific Plans

Specific Plans are the primary implementation documents for the Master Plan. Each Specific Plan covers a portion of the Mountain House community. Specific Plans are implemented by Development Permits.

Specific Plans are both policy and regulatory documents. They provide detailed information and instruction regarding the types, locations and densities of land use; development phasing; zoning regulations; public infrastructure and services; development standards; and design guidelines.

Specific Plans do not grant an entitlement to develop land, but they are a critical link in the planning-to-development process. Land use entitlements, that is, rights to develop, are granted only by approval of Development Agreements, vested tentative maps and building permits.

Development may occur in several neighborhoods or areas simultaneously under different Specific Plans. To avoid conflicts, a parcel of land will be included in only one Specific Plan. Some Specific Plan areas may be built out over only a few years, while others may take many years.

The integrity of the community must be preserved as various Specific Plans are processed. Issues such as the compatibility of land use patterns, aesthetics and the continuity of circulation routes are matters of concern at neighborhood borders and other Specific Plan boundaries.

Where feasible, development of a new neighborhood should be next to an existing neighborhood or one under construction. The benefits of contiguous land development are the less costly extension of facilities and services, the ability to have services and facilities that otherwise would not be available, and the sharing public resources.

Policies:

- a) Specific Plans shall be consistent with the General Plan, the Master Plan and the Public Financing Plan.
- b) Each Specific Plan shall be processed with a Financial/Fiscal Addendum to the Public Financing Plan. The Addendum shall include documentation that the Specific Plan is financially feasible and not detrimental to the fiscal condition of the County.
- c) Specific Plans shall implement community-wide programs and plans.

- d) Specific Plans shall be compatible with the approved Specific Plans for adjacent areas.
- e) All property within the Mountain House community shall be included in a Specific Plan. Property may not be included in more than one Specific Plan.
- f) A Specific Plan shall be approved prior to the submittal of a first Development Permit in the area.
- g) Specific Plans may be implemented by Development Agreements, and by other agreements, as appropriate.
- h) Future Specific Plans may be sequential and independent of one another, or may be developed concurrently.
- i) The area to be covered by each Specific Plan shall be approved by the Director of the Community Development Department.

17.5.2 Specific Plan Contents

State Government Code Section 65451 requires that a Specific Plan include certain contents. Given the Specific Plan requirements of this Master Plan, it is expected that the contents of Specific Plans for Mountain House will exceed the minimum requirements of State law.

This Master Plan identifies numerous items that must be addressed in Specific Plans. These items are identified in the individual subject chapters of this Master Plan.

17.5.3 Specific Plan Amendments

Two types of amendments are expected for Specific Plans: area expansions and plan modifications. The geographic area of a Specific Plan may be expanded based on the Specific Plan policies in this Master Plan.

Policies:

- a) Specific Plan area expansions and substantive changes shall be processed as Specific Plan Amendments using the same process as the initial Specific Plan submittal.
- b) Each Specific Plan shall be internally consistent.
- c) Minor differences in boundaries from those shown in the Specific Plan map may be considered in conformity with the General Plan, unless an undesirable precedent would be set for more extensive and non conforming changes in adjacent areas.

17.5.4 Specific Plan Minimum Area

Mountain House is divided into 12 residential neighborhoods, each of which contains a range of housing types and densities as well as schools, parks and commercial uses. Most neighborhoods also contain some community-scale facilities, services and land uses. Policies regarding the geographic area covered by a Specific Plan are designed to ensure a coordinated development of the community and to facilitate the administration of plans.

Policies:

- a) All of each neighborhood, as defined in the Master Plan, shall be included in the same Specific Plan.
- b) More than one neighborhood may be contained in a single Specific Plan.
- c) A Specific Plan may include only a portion of a neighborhood initially if it includes the neighborhood center (the K-8 school, the neighborhood park and the neighborhood commercial area). The remainder of the neighborhood shall be covered under a single amendment to the Specific Plan.
- d) A Specific Plan for land abutting a community or regional park shall include applicable portions of the park, as determined by the County.
- e) The County may require the expansion of a proposed Specific Plan area to include land that may be needed or may be impacted by the proposed development.

17.5.5 Specific Plans For Designated Areas

It is contemplated that Specific Plans may be processed for certain uses, including the Town Center, Mountain House Business Park, Old River Industrial Park, and the marina. Although development of each area may occur in phases, it is desirable to have all of each area included in a single Specific Plan.

Using the Town Center as an example, it is expected that development will progress incrementally as the population grows. One Specific Plan will be prepared for the Town Center. Because the Town Center will be developed over a long period, amendments to the Specific Plan are likely. In another case only the first half of Old River Industrial Park is included in the first Specific Plan so the Plan will need to be amended before the remaining lands are developed.

Certain public facilities or services may be required before a Specific Plan is prepared for the neighborhood in which the facilities are to be located. Examples include community-wide facilities such as arterial roads, water, sewer and drainage infrastructure, and utilities. This infrastructure may pass through lands not yet included in a Specific Plan, but should be discussed in the Specific Plan requiring them. In such cases, future Specific Plan needs should be considered.

Policies:

- a) Mountain House Business Park and Old River Industrial Park shall be included in not more than one Specific Plan for each area, but each Specific Plan may be planned and approved in phases via the Specific Plan Amendment process (see Section 17.5.3: Specific Plan Amendments).
- b) The initial Specific Plans for the marina and the Town Center shall include their entire areas.
- c) When a public facility located in an area without a Specific Plan is made necessary by the development of another area, the facility initially must be included in the Specific Plan being prepared. The water treatment plant, however, may be planned independently and incorporated in a later Specific Plan.

17.6 SPECIAL PURPOSE PLANS

Some areas previously covered by a Specific Plan may require an additional level of design study and review. The Community Commercial areas and the Neighborhood Centers are examples. For such "focus areas," more detailed plans will be required prior to the approval of Development Permits. Special Purpose Plans will be used for this purpose. Special Purpose Plans require the same hearing process as do Specific Plans, but they are more oriented to immediate development. Under provisions of the County Development Title, uses within an area covered by a Special Purpose Plan may be approved with only an improvement plan, and use permits and site approval applications are not required. Special Purpose Plans must be approved prior to approval of the first Development Permit (such as a Tentative Map) for the focus area.

Policies:

- a) Details of certain focus areas may be deferred in the initial Specific Plan for an area. Prior to the approval of a Development Permit for development in these areas, a Special Purpose Plan shall be approved. The focus areas include the following:
 - Central Commercial Area
 - Village Centers
 - Neighborhood Centers
 - Freeway Service portion of Mountain House Business Park.
- b) Special Purpose Plans for Neighborhood Centers shall be provided in conjunction with school planning. Special Purpose Plans for other focus areas shall be approved prior to the approval of Development Permits for the subject area.
- c) Special Purpose Plans for focus areas shall address site planning including building locations, parking, circulation, relationship to adjacent areas, landscape design, signage, lighting, site furnishings, and transit facilities.

17.7 DEVELOPMENT PERMITS

17.7.1 Definition of Development Permit

County "Development Permits" as used in this Master Plan, are either discretionary permits (except for those of a legislative nature) or ministerial permits. "Discretionary permits" involve some discretion on the part of the Review Authority, and they may be approved, denied, or approved subject to conditions. "Ministerial permits" allow no discretion by the Review Authority; they must be approved if the application meets specified requirements. While discretionary permits are subject to the environmental review requirements of the California Environmental Quality Act, ministerial permits are not. Examples of discretionary permits are tentative subdivision maps, use permits, and variances. Examples of ministerial permits are final subdivision maps, encroachment permits, grading permits, and building permits.

17.7.2 Exceptions to First Development Permit

Many of the implementation measures in this plan must be completed prior to the submittal of the First Development Permit. Exceptions to the First Development Permit as defined above are as follows.

- a) Long Lead Items: Applications and approvals for long lead, public facilities shall be exempt from the definition of First Development Permit. Such facilities include those related to the wastewater treatment plant, water treatment plant, wastewater reuse, raw water conveyance lines and pump, relocation of agricultural drains and canals, utility lines, and electrical and gas services.

The purpose of this exception is to permit the processing of long lead items without waiting for the approval of ~~non-essential~~ plans and programs that are not necessary for their approval. Long lead items may be processed concurrently where appropriate.

~~Certain Master Plan provisions do not fall under this exception when they are specifically required for major impact facilities or are otherwise required for public health and safety.~~

- b) Preliminary Maps: Preliminary Maps shall not be considered to be First Development Permits. A Preliminary Map shall mean any lot line adjustment, merger, or tentative subdivision map that is sought only for the purpose of financing, land sale or exchanges, or planning area segregation, after which a more detailed mapping will be submitted for approval required before construction permits could be obtained for the mapped or affected area. These maps or property boundary adjustments shall be consistent with underlying agricultural zoning and with the provisions of the Subdivision Map Act. Preliminary Maps may be completed for areas not yet covered by a Specific Plan. If located within an area covered by an adopted Specific Plan, ~~Area~~, a Preliminary Map area shall be no smaller than the parcels defined by Collector or Arterial roadways or by a change in zoning district on the Specific Plan zoning map. All areas addressed by a Preliminary Map will be subject to the Specific Plan process prior to development.

17.8 PUBLIC PROJECTS

Public projects of the County or the Mountain House CSD are subject to the same review, permitting and environmental review processes as are private projects. All public projects are subject to County review under State government Code Section 65402 for consistency with the General Plan. Public projects include land acquisition and abandonment, the construction of public facilities such as a sewage treatment plant or road, and the siting of schools.

17.9 LAFCO PROCEEDINGS

A Community Services District (CSD) will be formed to provide a number of services in Mountain House. Approval by the Local Agency Formation Commission (LAFCO) is required for the CSD formation and to authorize specific governmental powers as provided under the State Government Code. Proposed legislation to amend State law to allow additional powers for the CSD may be acted on prior to CSD formation.

LAFCO approval will be required for expansion of CSD authority if the CSD powers are amended, as well as for special district changes: annexations, detachments, eliminations or

formations. Implementation measures may be refined by the organizational changes effected through the LAFCO process.

17.10 ENVIRONMENTAL REVIEW

Future Specific Plan and any plan amendments will require environmental assessment. If any new significant environmental impacts are identified, an EIR may need to be prepared. The necessity and scope of further environmental review for development projects is expected to be very limited if the project is in conformance with adopted plans.

When an EIR has been prepared for a Specific Plan, Development Permits for residential projects conforming to that Plan generally will not require preparation of either a negative declaration or an EIR, unless the specific criteria are met to require a subsequent EIR. A determination will be made in connection with each new approval, whether and to what extent further environmental review is required under CEQA. The Development Permits must comply with adopted Mitigation Monitoring Programs.

17.11 DEVELOPMENT AGREEMENTS AND PUBLIC SERVICES ALLOCATION AGREEMENT

A Development Agreement is a legal contract between the County and a developer. The purpose of the Development Agreement or other agreement is to contractually set the rights and obligations of the parties involved in a project, such as the implementation of a Specific Plan. The Development Agreement may assign responsibilities for certain parties to carry out the implementation measures contained in this Master Plan and in subsequent Specific Plans.

Although a Development Agreement must be consistent with the plans and regulations in effect at the time of its enactment, it may contain provisions that would allow development occurring under it to be exempt from future changes to the General Plan and Development Title. This provides certainty to the developer that development can occur in a predictable fashion.

The first Development Agreement will be executed after the Master Plan is adopted, but before any Development Permit or other approvals are granted within Mountain House. This timing is necessary to ensure that adequate provision is made for plans and programs that are to be prepared subsequent to adoption of the Master Plan.

A Public Services Allocation Agreement will be entered into between the County and the Community Services District. The Agreement describes the services to be provided and powers to be delegated by the County to the Community Services District. The Agreement includes authorizations, acknowledgments, commitments, and the acceptance by the parties as to the services to be provided by the County and the CSD.

Other agreements--involving service providers, property owners, developers, builders and the County--may be used to implement Mountain House plans.

Policies:

- a) Prior to the submittal of any Development Permit, the County and Master Developer shall enter into a Development Agreement to ensure compliance with Master Plan implementation.

17.12 PHASING

Twelve residential neighborhoods are defined within this community. Neighborhoods will serve as unit of development through the phased implementation of the community. In addition, infrastructure will be designed and phased in segments consistent with neighborhood phasing. Each neighborhood will be served by its own neighborhood center (containing a school, park and neighborhood area) so that development of one neighborhood will have a limited impact on other neighborhoods in the community. Contiguous development will provide the most cost-efficient phasing of public facilities and services, which will reduce the total costs borne by the project and provide a more fiscally and financially balanced community.

Policies:

- a) Contiguous growth shall be strongly encouraged throughout development of the community.
- b) Development phasing shall not result in a net fiscal deficit to County or special district funds.
- c) Each Specific Plan shall be evaluated in combination with all prior Specific Plans to determine the feasibility of adding the incremental public infrastructure required to serve land uses within the new Specific Plan and to assess the cumulative burdens on existing and proposed land uses. This test of financial feasibility shall be conducted for each Specific Plan.
- d) Specific Plans shall address phasing for services and facilities and shall develop review procedures which ensure that ongoing County review checkpoints are provided with each stage of community development.

17.13 MONITORING

Monitoring programs are used as tools to ensure that plan assumptions are correct and that policies and implementation measures are effective. ~~Specific monitoring is required in programs are included~~ the Master Plan and may be required included in Specific Plans and as conditions of Development Permits. Analysis of monitoring results may be a basis for modifications of plans.

An Environmental Impact Report usually results in a Mitigation Monitoring Program. This is a program of specific measures designed to reduce or avoid particular impacts to the environment. The Program identifies the parties responsible for implementation, monitoring and reporting on particular measures, and it specifies performance schedules. Where feasible, Mountain House plans will be revised to include mitigation measures that are developed through the environmental review processes.

~~The Master Plan contains the Mountain House monitoring programs. The reader is directed to the appropriate chapter for the specific provisions of each of the monitoring subjects listed below:~~

17.13.1 Community Monitoring

Community monitoring will track aspects of the community as it develops in order to protect the County from potential negative impacts and insure the implementation of Master Plan provisions. Community monitoring programs are separate from the mitigation monitoring requirements identified by the EIR, although some elements of community monitoring are intended to satisfy environmental review requirements.

Analysis of monitoring results may be a basis for modifications in plans for the community.

Policies:

- a) ~~The assumptions, policies, and County shall initiate a procedure for a biannual review and revision of implementation measures and programs as necessary to achieve the goals and objectives of the Master Plan, the Public Financing Plan and Specific Plans shall be periodically reviewed and revised as necessary, to achieve the goals and objectives of the Master Plan.~~
- b) Community monitoring programs shall address Jobs/Housing and Affordable Housing Programs, need for and provision of facilities and services, traffic, Transportation Demand Management, and fiscal/financial stability.
- c) Community monitoring shall be administered by the County and may be done by the County or the CSD.
- d) Monitoring shall continue until such time as it is determined by the County that it is no longer needed.
- e) ~~Results and analysis of community monitoring shall be summarized in an annual Community Report, due by April 1 following the year of analysis.~~
- f) Community monitoring programs shall address fiscal/financial stability, jobs-housing and affordable housing programs, traffic, Transportation Demand Management (TDM), and the provision of facilities and services.
- g) Community monitoring data shall be provided to the County and School Districts to assist in planning for the educational facilities. ~~plan.~~
- d) ~~Monitoring shall be conducted by the Community Services District and the County as detailed in applicable plans, agreements and permits.~~
- e) ~~The County shall be responsible for an annual Community Report due by April 1 for the previous year.~~
- g) ~~Mountain House plans shall be revised to incorporate environmental mitigation measures.~~

Implementation:

- a) Establishment of Monitoring Programs. The County and the CSD shall establish a community monitoring program prior to the submittal of the first Development Permit. The program shall address the date to be collected and the analysis and reporting that must occur, consistent with the requirements of the Master Plan. The program shall also identify County and CSD responsibilities and the timing of data collection and reporting.
- b) Community Report. The annual Community Report shall be due by April following the year end analysis.

17.13.2 Community Data Collection

Community monitoring programs will ~~shall~~ be based on the collection of data ~~including that may include but is not necessarily limited to the following:~~

a) Demographic and Land Use Data

- Number of households
- Population by sex and age
- Student population by grade
- Employment by place of residence and job category
- Jobs ~~provided to~~ in the community
- Number of residences in each zone ~~by zoning category~~
- ~~Total~~ Undeveloped acres in each zone ~~in all land use categories~~
- ~~Total~~ Developed acres in each zone ~~in all land use categories (with infrastructure but no buildings)~~
- ~~Total developed and built-out~~ acres in all zones ~~land use categories~~
- Ride sharing
- TDM programs
- Sales tax
- Property tax

b) Public Services Data

- Public report distribution
- Library usage
- Parks usage
- Police calls/responses
- Fire calls/responses
- Medical resources
- Permits issued ~~ting and inspection services~~

c) Public Utilities/Infrastructure Data

- Roadway/intersection traffic counts
- Water usage/water quality
- Wastewater treatment quantities/quality
- Electrical usage
- Natural gas usage

17.13.3 Fiscal and Financial Stability

The data collection and Community Report mentioned above will be used to ensure that Mountain House proceeds only with positive fiscal impacts to the County and that the community is financially stable.

The Mountain House Public Financing Plan includes the basic policies and guidelines for protection against negative fiscal impacts.

Policies:

- a) The County shall monitor demand for ~~new~~ facilities and services and revenue generation during build-out of the new town to assure that expenditures are offset by new revenue.

- b) Depending upon the results of the monitoring, adjustments can be made in service delivery, fees and charges, and/or use of other financing mechanisms.
- c) The Mountain House CSD shall prepare an annual fiscal status report as part of the ongoing monitoring program, and shall provide any data or analyses the County may need to ensure the ongoing fiscal health of the new community.

~~3.10.4 Right to Farm Ordinance~~

Policies:

- ~~a) Every resident of Mountain House shall be notified of the County's Right to Farm ordinance. Notification shall be done by delivery of the subdivision report.~~
- ~~b) The monitoring program shall document the adherence to the notification procedure.~~

17.13.4 Agricultural Mitigation Fee

Development of the Mountain House new community will result in the loss of 3,600 acres of prime agricultural soils. The General Plan contains policies that encourage the County to establish mitigation fees to be paid when lands are converted from agriculture to an urban use. Collected fees could be used for programs such as purchasing development rights or fee title to agricultural lands.

Implementation:

- a) **Agricultural Mitigation Fee.** If a Countywide agricultural mitigation fee were established, an agricultural mitigation fee, based on each acre converted to an urban use, shall be paid by the developer to the County prior to the recordation of any final Map.

17.14 ADMINISTRATION

San Joaquin County will have primary administrative authority for the implementation process. "Administrative authority" refers to the power to direct implementation of the Master Plan, Public Financing Plan and Specific Plans and to initiate revisions that are necessary or convenient for the attainment of Plan objectives and the maintenance of consistency with Plan policies.

The Community Services District (CSD) will have an administrative role which grows as the community matures. This role will be defined in the Public Services Allocation Agreement that is entered into by the County and the CSD.

Other districts will have specific administrative authority: Lammersville Elementary School District, Tracy Joint Union High School District, Tracy Rural Fire Protection District, and the San Joaquin County Mosquito Abatement and Vector Control District. Approval by the Local Agency Formation Commission may be required for the extension of authority to a district.

In some instances the responsibility for implementation may be shared by two or more agencies. For example, the County may delegate responsibility for providing a service to the CSD which, in turn, may contract with another agency to provide the service.

Some implementation measures may require a clearance or permit approval from a state or federal agency or a local district. In such instances, the responsibility for implementation will rest with the party that is the applicant for the underlying County development approval. Table 17.2: Required Approvals identifies state and federal agencies from whom permits or clearances will be required.

Private parties will share responsibilities for implementation. The “master developer” is the proponent for the Master Plan, the Public Financing Plan and Specific Plan I. Other private property owners—including developers, builders and homeowners—are referred to as “merchant builders.” Other private parties may include a property owners’ association and a homeowners’ association. The assigned agencies and responsibilities should not be considered conclusive as many will change as the community evolves.

Table 17.2: Required Approvals

The purpose of this table is to identify approvals that will be required after the Master Plan is approved. The listing includes local, state and federal agencies, special districts, utilities and private companies. The table does not include subsequent approvals that will be required by San Joaquin County agencies.

Agency	Approval	Timing
FEDERAL AGENCIES:		
Federal Emergency Management Agency	Letter of map revision to remove flood hazard designation from property near Old River	Prior to recordation of any Final Maps for urban development adjacent to or within the historic flood hazard area
U.S. Army Corps of Engineers	Section 404 Permit (Clean Water Act) for discharge of dredged material into waters of the U.S. Section 10 Permit (Rivers and Harbors Act) for work in navigable waterways Nationwide Permit No. 12 for construction of raw water conveyance pipeline	Development Permit Condition of Approval Prior to initiation of work Use Permit for water treatment plant
U.S. Fish and Wildlife Service	Incidental take permit/habitat conservation plan regarding endangered or threatened species	Prior to any grading or building permit
Federal Highway Administration	Improvements to interstate highways, I-205 and I-580	As determined in the County Regional Transportation Plan and the Altamont Strategic Transportation Plan
U.S. Coast Guard	Aids to Navigation (signage) for marina on Old River	Prior to operation of marina
National Park Service	Cooperative Agreement for extension of the De Anza Trail across site	Specific alignment to be included in the Parks and Open Space Plan; construction to occur as defined in Specific Plans

STATE AGENCIES:		
Caltrans, Districts 4 and 10	Project Study Reports Encroachment Permits Improvements to State highways and interchanges	As determined in Master Plan Prior to construction or as Development Permit Condition of Approval As determined in County Regional Transportation Plan and Altamont Strategic Plan
Department of Real Estate	Public Reports	Prior to sale of lots
Integrated Waste Management Board	Solid Waste transfer facilities	
Reclamation Board	Encroachment permit for Old River levee work	Prior to construction of levee modifications
RWQCB, Central Valley Region	NPDES permit	Development Permit Condition of Approval
	Remediation for pesticide and other underground contamination	Development Permit Condition of Approval
	Discharge to Old River	Development Permit Condition of Approval
	Water quality certification (Section 404 permit)	Development Permit Condition of Approval
Health Services, Office of Drinking Water	Water system	Use Permit for wastewater treatment plant
Department of Fish & Game, Region 2	Compliance with Endangered Species Act	Mitigation specified each Specific Plan: Compliance prior to Development Permit
	Streambed Alteration of Old River and Mountain House Creek	Development Permit Condition of Approval for land adjacent to Old River and creeks
State Lands Commission	Dredging within State-owned lands or beds of navigable rivers	Development Permit Condition of Approval for land adjacent to Old River
	Leases to use State-owned lands for purposes other than dredging	Development Permit Condition of Approval for land adjacent to Old River
PUC/Southern Pacific Transportation Company	Rail crossings	Timing specified each Specific Plan: Compliance prior to Final Map
Department of Toxic Substances Control	Remediation of pesticide and other underground contamination	Prior to approval of Development Permit
Department of Water Resources	Raw water intake pump and transmission pipeline	Use Permit for water treatment plant

Lammersville Elementary and Tracy Joint Union High School Districts	School Facilities Plans	Prior to first Development Permit
Byron-Bethany Irrigation District	Water service agreement	Master Plan
LAFCO, San Joaquin County	Formation of CSD	Master Plan
SJVUAPCD	Authority to Construct	Prior to construction

17.15 INTERPRETATIONS, AMENDMENTS AND MINOR ADJUSTMENTS

This Master Plan and subsequent Specific Plans are legislative acts approved by the Board of Supervisors. Certain elements of these Plans are approved by resolution, other parts by ordinance.

Where interpretations are necessary, the Director of the Community Development Department will have the decision-making authority, with such decisions appealable to the Planning Commission and the Board of Supervisors. No changes to previously adopted resolutions or ordinances are required for interpretations.

Where substantive changes are proposed, an amendment will be required. Amendments require the completion of an environmental assessment and the adoption of new resolutions or ordinances. Amendments follow the same procedures as adoption of the Plans: public hearings before the Planning Commission and Board of Supervisors and approval by the Board of Supervisors.

Minor adjustments may be approved by the Director of the Community Development Department. "Minor adjustments" shall be limited to editorial corrections and clarifications.

Implementation:

- a) Master Plan Amendment. An amendment to the Master Plan shall require analysis to ensure internal consistency within the Master Plan and consistency with other plans relevant to Mountain House. This analysis shall include but not be limited to the following: Any impacts on the Jobs/Housing and Affordable Housing Programs and the adequacy of water, wastewater, and transportation facilities shall be analyzed, along with any financial or fiscal impacts.

U.C. BERKELEY LIBRARIES



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